

THIRD

Co Improve the Soil and the Mind.

SERIES

Vol. VII.

ALBANY, OCTOBER, 1859.

No. X.

PUBLISHED BY LUTHER TUCKER & SON, EDITORS AND PROPRIETORS.

ASSOCIATE ED., J. J. THOMAS, UNION SPRINGS, N. Y.

PRICE FIFTY CENTS A YEAR.

The Cultivator has been published twenty five years. A New Series was commenced in 1853, and the six volumes for 1853, 4, 5, 6, 7 and 8, can be furnished, bound and post-paid, at \$1.00 each.

The same publishers issue "The Country Gentleman," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at \$2.00 a year. They also publish

publish

"Letters on Modern Agriculture."

BY BARON VON LIEBIG-EDITED BY JOHN KLYTH, M. D.

This is the most remarkable production of its distinguished author, who here enunciates his matured views on Agricultural Science with the same wonderful resources of logic and expression that characterize all his writings. The volume consists of 270 12mo. pages, and contains 14 chapters or letters.

In his Preface the author remarks that he has written with particular reference to the state of things in Germany, and does not intend to implicate English farmers or teachers in the errors which exist in his own country. He says:

"These letters must therefore be regarded as a mirror in which the scientific principles already established, and certain erroneous doctrines prevailing in practice, are reflected side by side; and each individual must be left to draw his own conclusions, on comparing his own acts with the standard thus furnished him."

One of the characteristics of this book, is its sharp controversial tone. Baron Liebig feels, with justness that he has been grossly misrepresented by a set of second or third rate Scientific men, who have educated themselves up to a tolerable familiarity with the experimental appliances by whose aid scientific discovery is prosecuted, and therefore deem themselves, in fact, philosophers, although deficient in the higher gifts of rightly planning an inquiry, and rightly interpreting the answers which willing Nature makes to their blundering questions. We cannot, however, throw aside all that these well-intentioned men have done, nor place them utterly under the ban of Science; neither can we accord infallibility to the logic of our distinguished author, nor accept all his doctrines as the real expression of natural

Science takes her materials from cabin as well as from palace, and the humblest observer is a builder in her walls as much as the imaginative speculator or the severe logician. Each has his office to perform in the development of science, and when, from the difference of their gifts or the oppositeness of their points of view, they come to conflicting conclusions, it is to be expected, nay hoped, that they will fight away all errors, so that the truth shall stand unblemished

The first letter is occupied with the author's views upon the Relations of Science to Practice. He shows that the method of Experience founded on limited observation, by which Agriculture has chiefly progressed hitherto, is in effect opposed to the method of Science founded on experiment. He urges that the former has its limit,-the limit of the senses, which has been long ago reached, while the latter, which has no limit, but may be extended indefinitely as long as the human imagination can devise anything new, is the only way in which Agriculture can progress,-the only means to which the statesman can appeal to save the growing populations from ultimate starvation.

He charges upon practical men the folly not only of not assisting science, but of "opposing her in almost every thing she has done." He charges them with a blind adherence to a blind experience, and after setting forth the superiority of the scientific or inductive method as a means of progress, he declares that

"The world has been metamorphosed by its introduc-on. It is to this method that the present day is indebt-l for its peculiar characters. The Greeks and Romans "The world has been metamorphosed by its indebted for its peculiar characters. The Greeks and Romans
possessed metaphysics and the fine arts as we do; but the
natural sciences, the offsprings of the inductive method,
were unknown to them. To this method we owe the
millions of willing and industrious slaves, whose labor
costs no tears or groans. It has bestowed on Germany
alone, what is equivalent to from 700,000 to 800,000 horses,
which with untiring energy and the speed of the wind,
bring from the most distant lands their various products
to satisfy the wants of man; and they need no hay, no
corn, to feed them. The fruitful land necessary to produce the food for this number of horses of flesh and
blood, remains for the use of five to six millions of men
who can be maintained on its surface."

Our author now goes on to recognize that the value of science has latterly been admitted by the more intelligent and progressive agriculturists-a class that "for more than half a century have directed all their efforts to gain an insight into the processes of husbandry." "The natural sciences were even recognized to be the source of progress," and "agriculturists felt the necessity of accounting for their acts, and the knowledge that they were doing the right thing in the right way, appeared to be indispensable to all progress." But at this point the pseudo-philosophers, the professional agricultural chemists, who work for present emolument, and deluge the world with sham science, made their appearance. Our author gives these men such a "dressingout" as might be expected from his trenchant pen.



But we must here demur to the sweeping two-handed manner in which he wields his broadsword. No doubt this "severity is inspired by sincere conviction;" and one full of the consciousness that we are but on the threshold of Agricultural Science, may properly feel indignation on finding that in "a recent hand-book of practical agriculture, the effect of soils, manures, irrigation, drainage, and the action of each fertilizing agent on individual classes of plants, are all brought into harmony and explained in the most beautiful manner."

Much may have been published in Germany that is thus complete, where completeness is an impossibility, and a false science is doubtless too much encouraged; but it is going too far to assert that "this is all sham, without a single law, or a single truth."

If Liebig is forced thus to express himself concerning what claims to be the agricultural science of Europe, what would he say were he condemned to read the lucubrations of some of our American agricultural philosophers! Suppose the much injured Coryphæus of our agriculture—the resplendent American Jacobus Aureolus Theophrastus Paracelsus Bombastus were to collect his original contributions to agricultural science—the leading items of which might be, Tannic acid a direct food of the Strawberry—Shade beneficial to Vegetation—Chilian Guano—Nitrogenized Super-phosphate of Lime—Progression of Primaries, &c., and dedicate the same to his admired and much quoted friend Baron von Liebig, what would the latter have more to say of sham in German agricultural science?

We claim to know more of this matter than Prof. Liebig can, and as we are content to be patient and let these air-guns go off in their own way, so long as not only the powder, but the shot likewise, is mere "gas," we really wonder that our author has taken such umbrage at the transatlantic shams.

There is no unmixed evil in this world, and as the original Paracelsus, in spite of his superlative arrogance and his absolute want of any regard for truth and justice—so that he stands as the great prototype of quackery, accomplished indirectly a vast deal of good; we may even hope that something useful will remain, after some yet infant Hercules shall grow equal to cleansing the augean stables of our popular scientific literature.

And here, to pass from those who are notorious vagarists, to a field occupied by earnest workers, we find a great deal of misdirected energy in our country, and chiefly in the chemistry of the Agricultural Departments of the Patent Office, and of various State Geological Surveys

We find in the Reports yearly emanating from such sources, numerous analyses of plants and soils, standing there in stiff order, executed with all the form and perhaps in all the spirit of the truest science, but worthless, except as embellishments. These analyses are good for nothing. Nobody uses them for any important purpose, because they are made for no important purpose. The general ends of such analyses were long ago served. Henceforth, in order to be useful, they must be made as a part of some extended special inquiry, in planning which, they are clearly foreseen to be indispensable to the results. Science consists, not in the making of analyses or experiments, but in the using of them.

To return: In setting forth the difference between the methods of Practice and of Science, and in animadverting upon the faults of the imperfectly scientific, it ap-

pears to us that Baron Liebig has separated related things with altogether too much rigor.

In our estimation, there is at this day, taking the cultivated world together, no real "conflict between practical agriculture and scientific chemistry." Whatever disagreement there may be, is no greater than also exists between practice and practice on the one hand. or between science and science on the other. Not to adduce any of the unsettled questions of Practice, we see that chemists have not fully decided whether or not nitrogen is appropriated by plants in any other forms than those of ammonia and nitric acid, and though Baron Liebig is certainly one of the most competent men now living to investigate a chemical question, whether it require the genius of the experimenter or of the logician; yet we are prepared to do battle against some of his most cherished theories, and to side in some particulars, with those whose science he denounces as "sham." The conflict, if anywhere, is everywhere, and all valiant lovers of the truth will enter the lists to help fight it out. Neither do we admit that the method Practice employs for her progress--the deductive method is so absolutely opposed to and irreconcilable with the scientific or inductive method.

Our author has in mind, in his writing, two extremes, which certainly differ widely enough; but he forgets that there are also an indefinite number of connecting links between them, so that while the most empirical and unreasoning bit of progress that the world ever made, has not been altogether destitute of the scientific spirit, neither have the proudest achievements of modern science been pure from the gropings of empiricism.

The chemist in his laboratory, in attempting to discover hidden truths, is obliged to "cut and try," in the same way as is done by the farmer who seeks to improve his soil by manures and other appliances.

Leverrier's calculations led to the discovery of a new planet, but it was not found where he calculated!

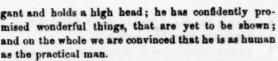
Liebig explained the use of plaster by asserting its power to absorb and fix ammonia; but Boussingault demonstrated that in the soil it can have no such effect, and now facts render it probable that plaster rather unfixes ammonia when in the soil.

Liebig once attributed great value to artificial supplies of ammonia to crops, and thought its efficacy due to its serving as a source of nitrogen, which might otherwise be deficient; now he considers the action of ammonia to be almost purely indirect—a solvent for the mineral matters of the soil.

Thus Science, in quarters where our author will be disposed to admit its genuineness, is at war with itself. It is in fact, imperfect, undeveloped, and struggling. But Practice is no more badly off.

It is true that practical farmers have made great blunders; in their attempts at progress, they have grossly misunderstood Science, have depreciated and misrepresented her; have ignored or even fought against her inductions. On the other hand, it is equally true that scientific men have made the most egregious mistakes, and have been as stubborn in their errors as other men are. They have been in many cases shockingly ignorant of practical agriculture; have left unconsidered the fact that the first business of the agriculturist is with his Art, and that only after he has fed himself and the rest of the world, can he attend to Science. The scientific man is often arro-





It is then devoutly to be wished that Practice and Science would unite all their resources for the advancement of agriculture, remembering that each has its special province, but that both must work together, in order to realize the best results. And we must not conceal the obvious fact that Science is ahead of Agriculture, not so much in the exclusive possession of the true method of progress as in the vigorous application of this method. Here Practice may learn of Science a most useful lesson.

First of all, practical men must educate themselves to an understanding of scientific terms—to an appreciation of scientific conceptions. If they will but place themselves on the level with Science, all misundertandings will cease, or at least so far diminish as not to impede progress.

In agriculture there should be established that kind of system which is now observed among the cultivators of Chemistry and Physics—a system that ensures the most rapid development of new and true facts and principles. Says our author:

principles. Says our author:

"A glance at a chemical or physical journal must fill the mind of an agriculturist with astonishment, at the mass of problems and their solutions which it contains, and at the immense labor which has been readily and without reward bestowed upon the whole. Each day brings its own progress without strife; for each cultivator of these sciences knows what constitutes a fact, conclusion, rule, law, opinion and explanation. There are specific tests for all these which every one uses before he puts each to the test of its own peculiar touchstone, before he circulates the fruit of his labor. Each assiduously seeks to bring to light hidden facts, which are immediately submitted to proof by others, and receive their proper place when they are found to be genuine. One individual possesses the talent for seizing the points of resemblance between two facts; another has a keen eye for their differences; in this way they render mutual assistance in the proper clucidation of phenomena. Special pleadings on the part of any one for his own peculiar views, without striking facts to support them, or the attempt to palm off on others any unproved facts, is instantly rebutted by the moral of science. The earnest desire of a mutual understanding is ever paramount."

In Germany there has arisen a noble company of

In Germany there has arisen a noble company of investigators, educated both in the field and in the laboratory, who are begining to do for Agriculture what has been doing for Science throughout the last 50 years. But in this country, what a sorrowful state of things! We have hardly one man who is doing anything to develop the great laws of Agricultural Science. It is, however, impossible that there should be investigators before practical farmers shall say,—"We believe that Science is able to benefit our profession, and we will establish and support stations for experimental investigation; we will employ and pay men of true Science to work in our behalf."

We hope that this stirring letter of Baron Liebig's, will be read and pondered by all who have at heart the interests of agriculture. Let this country, whose genius and people are so much admired by the author of this book, deserve to have better things written of it, than he has written of his Father Land, where he says:

"One of the worst points in the character of practical men, is their sensibility to opposition. The total want of foundation for their erroneous views, is the reason why they regard them with such affection and tenderness. It makes them blind to their interests, and deaf to all instruction. They look on every one as an enemy who does not flatter their prejudices, who openly tells them that there yet remains much to be learned, and that the con-

sciousness and confession of our ignorance, and the knowledge of our faults, are the first steps toward improvement. I who in my heart believe myself to be their most candid and sincere friend, must therefore, at once make up my mind to bear with resignation the whole weight of their contempt, with which pride in their own experience fills them, if I attempt to prove the assertion that the prevailing system of agriculture for half a century, has been one of spoliation; and that if persisted in, the inevitable result will be at no distant date, the ruin of their fields, and the impoverishment of their children and posterity."

Seeding to Grass.

In answer to several inquires on this subject, we may state that seeding with a grain crop is chiefly to be recommended by its economy of labor, the ground being in order to receive the seed without any additional tillage. This is no doubt the best way to seed down with clover after wheat, sowing early in the spring, but instead of trusting "luck" for it to "take," we would always recommend rolling or a slight brushing-the latter will rather benefit than injure the wheat. The young crop of clover no doubt slightly lessens the growth of the wheat, but the injury is not great; in sowing timothy with wheat, a greater loss results to the grain crop. We have seen the timothy grow so large as to render cutting the grain crop quite difficult, and it evidently much diminished the product. The best way, undoubtedly, in seeding to timothy after wheat, is to turn over three or four inches of the surface soon after harvest, by means of a gang-plow, which will pass over three or four acres a day; and about the first of autumn, or sooner, sow the seed thickly (half a bushel per acre is more economical than less,) and brush it evenly in. Soon after the first rain, the whole surface will present a handsome green coating, which will be several inches high before winter, and the next year a fine crop will grow. If the seed is sown thin, the product will not only be much less, but there will be greater chances for weeds. Success requires that the seeding be done very early in autumn.

By sowing a mixture of clover and timothy at the rate of one bushel per acre, very early in spring on unoccupied mellow soil, and brushing it in, we have had a fair crop the first year, and a very heavy one the second, namely three and a half tons per acre at the first cutting, and an after-growth a foot high—which was nearly double the results with the ordinary quantity of seed. But we would not recommend the practice of sowing grass seed alone in spring for common farming, as the ground must be prepared exclusively for it, and we lose a crop of grain from the land.

Since writing the above, we observe in the Transactions of the N. Y. Ag. Society for 1855, the statement of an experiment by Wm. M. Holmes of Washington county, N. Y., in which a field was equally divided and half sown with grass seed and oats together, and the other half with oats alone. After harvest the oats stubble was plowed shallow and sown with half a bushel of timothy per acre, about the first day of autumn. The latter gave more fall feed than the spring seeding with the oats. The next season the spring seeding was "full of weeds;" the other was clear timothy, and was worth three dollars more per acre. Although cut quite early, the fall seeding gave 5,000 lbs., and the spring seeding only 3,800 lbs. There is no doubt that the full and even germination of the autumn sown seed on freshly turned soil, tended to keep down the weeds. The results would no doubt be varied by the amount of rain early in fall, but we think not to a great degree.





Gypsum or Plaster of Paris.

Closing a recent article on "Clover and Gypsum," (Co. Gent. Aug. 4, '59,) we promised to speak of the mineral constituents of the latter, and its practical uses as an application to the soil. We do not expect to offer any new theory in regard to its action, or anything beyond what a careful examination of published researches and experiments of others, and our own trials of it upon the different products of the farm, have taught us. So much even, may interest a portion of our readers.

Gypsum, or sulphate of lime, is a mineral compound frequently met with in large quantities, and where it may be quarried like stone. Many soils contain it in greater or less amount, and it is taken up by certain classes of plants-as their ashes show on analysis-and it is found in the excrement of grazing animals. Chemical science states the constituents of 100 pounds of native plaster or gypsum as-water 21 pounds, lime 33 pounds, sulphuric acid 46 pounds—the water being in chemical combination with the sulphate of lime. When burned or calcined, the water is driven off, and the 100 pounds of plaster is composed of 411 pounds of lime, and 58½ pounds of sulphuric acid, and 79 pounds, burned, equalling 100 pounds unburned plaster. This analysis is that of pure gypsum, but plaster as usually found, often contains several per cent of other substances, as clay, carbonate of lime, &c. If much lime be present it will injure the value of the plaster as an absorbent of ammonia, for which purpose pure gypsum is often usefully employed in stables and upon dung-heaps, but as a soil dressing, such plaster is as valuable as though pure, and more so than where lime is wanting.

The agricultural effect of plaster is the same, whether burned or unburned, if equally pulverized When reduced to powder in a raw state, it does not swell by absorbing water, even if placed in it, but remains like sand. If properly burned, and then exposed to atmospheric influences, it regains its 21 per cent of water, but after that has no special attraction for moisture. Hence we see no ground for the opinion entertained by some, that plaster benefits vegetation directly by attracting to it a greater supply of water than it would otherwise receive. Over-burning injures the attractive power of plaster—hence ground plaster is generally preferred and employed.

It is very generally conceded that gypsum is beneficial to most leguminous plants, and especially to red and white clover. It is frequently applied to peas, beans, corn, potatoes, and like products, and sometimes to wheat, oats, and barley, but most writers agree that its direct application to grain crops is of doubtful utility. Prof. S. W. Johnson, speaking of the effect of plaster says:-" Experience shows that the increased growth of a plant consequent upon the use of gypsum is disproportionately great in the stem and foliage; the production of seed is not greatly increased." This agrees with the general opinion and practice of farmers-those plants which yield a large mass of vegetation, and are valued mostly for this product, are thought to best repay the application of plaster, while it is seldom given on grains mostly cultivated for their seed. Tobacco and corn, with abundant stems and leaves, and potatoes with large vines and fleshy tubers and little seed, are adduced as further examples. Experiments have shown a large increase in the vine or straw of the pea, produced by a dressing of plaster, while the seed itself was but slightly affected in product.

Plaster operates most beneficially upon light, dry soils, or those of a sandy or loamy character. "Excess of moisture and poverty of the soil," says Johnson, "are the chief hindrances to the action of gypsum." The richer the soil and the better the culture, the greater the benefit received from a dressing of gypsum. Some soils, however, already possess a sufficient supply of sulphate of lime—or at least of sulphuric acid—hence no further application is required. Mucky soils are usually of this character, and sandy land overrun with sorrel, needs lime or ashes rather than plaster, as a fertilizer. Soils abounding in vegetable mold receive little benefit from gypsum, but even clays, if dry, and deficient in mold, are much improved in productiveness by plaster.

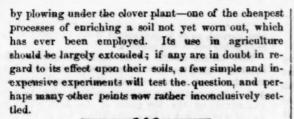
The action of gypsum is largely influenced by the character of the weather. It proves most beneficial in a warm, moist season - in one of a contrary character the effect is scarcely evident. This has been explained as resulting from the more abundant moisture of frequent rains, which dissolve a greater amount of the plaster, and thus render it available for the use of plants. At the same time the greater heat augments the chemical action of the leaves upon the sulphate of lime, decomposing the same and rendering it active upon other minerals contained in the soil. We have found that upon clover closely pastured, its effect is slight, while a similar field allowed to grow uncropped, was decidedly benefitted. This indicates, we think, that the good effects of this stimulant are elaborated through the leaves of plants, and the additional elements drawn from the air and soil by the more abundant vegetable growth.

The quantity usually applied is from 100 to 300 lbs. per acre, repeating the smaller amount more frequently -perhaps annually-on all crops to which it is found beneficial. It is usual to sow plaster on land newly seeded to clover, and the clover crop may be largely inly increased by an annual dressing of this fertilizer. Some have sown it on clover after cutting the first growth for hay, in order to increase the second growth for seed; but the desired effect has not usually been attained. The growth of clover hay has been increased, but the product of seed was imperfect, and a light crop. For corn and potatoes, a hill-dressing, after the first hoeing, of a spoonfull to the hill is generally given, though some sow it broadcast even on these crops. For wheat, many farmers recommend plastering the summer fallow, either before breaking up the same, or previous to the last plowing. Upon peas, beans, buckwheat, &c., it is usually sown soon after the plants appear above ground. The effects of any application of gypsum, are generally increased and hastened if followed by a warm and abundant fall of rain.

Gypsum, as we have formerly remarked, is not strictly speaking a manure, nor will it answer instead of manure. But on soils already fertile it acts as a stimulant, enabling certain crops to appropriate more readily and largely the food of plants already present in the soil, dew or rain, and atmosphere. It does not exhaust the soil, save as all increased production exhausts it—drawing upon its stores of fertility in proportion to the crop produced. It takes, as stated in our former article, an important part in the system of green manuring







Western Apples.

We are indebted to E. Y. Teas of Richmond, Indiana, for a fine collection of several varieties of Western summer fruits—some of which are well known to pomologists, and others of local character and not much known.

The Red Stripe, has been cultivated for many years at Richmond, but we believe not much elsewhere. It is rather large, long conical, (not unlike the Black Gilliflower in form,) somewhat ribbed, broadly and distinctly striped with light red on a light yellow smooth skin. It is very tender in texture, sub-acid, not of high flavor, ("good,") but undoubtedly valuable from its fair growth, and useful for stewing as well as for a table fruit.

Newton Early—very large, nearly the size of a Fall Pippin, roundish, much ribbed towards the apex, deep yellow with faint shades of green, stem short, cavity and basin deep, flesh rather coarse, sub-acid, of tolerably good flavor, not higher than "good."

Summer Hagloe—rather small, but very beautiful specimens of this fine culinary summer apple—flavor pleasant, "good." The Hagloe Crab is totally distinct small, and scarcely known in this country.

American Summer Pearmain—all the specimens nearly three inches in diameter, less red and more green than usually seen at the east, and of excellent flavor, standing high in the division of "very good."

Carolina Red June—specimens with the usual appearance, and exhibiting by the perfect condition in which they came, the peculiar excellence which this summer apple possesses of keeping long after it is ripe.

Sweet June or Hightop—fair specimens.

Maiden's Blush-rather larger and less reddened than those grown at the east.

The apple marked "Prince's Juneating," is not Early Red Margaret as suggested, but imperfectly grown American Red Juneating of Manning, or Early Strawberry, of the present lists. The Early Red Margaret has a short stem, is more ovate and less conical, and much earlier, being one of the earliest of apples.

Kirkbridge White-medium specimens; a fair apple, of moderate flavor.

Nut's Large—a large, conical, greenish apple, with faint red stripes—sub-acid, moderately good, juicy, very tender—probably a fine stewing apple.

Carolina Sweet—specimens too ripe; but from others which we have examined on former occasions, it appears to be a fine variety—rather large, nearly round, a deep rich yellow, and very sweet.

Claybank or Stillwater Blush—medium in size, roundish, slightly oblate, sub-acid, "good"—in general character similar to the Maiden's Blush, but probably less valuable.

Daniel—size medium, roundish oblate, stem long, in a small cavity; skin yellow, slightly striped with red; favor mild sub-acid, somewhat aromatic, of a fine, "very good" flavor.

Horse apple.—This nearly agrees with Chas. Down-

ing's description, except that the flesh is not coarse—and it is not "acid," as Elliott states, but mild sub-acid-

Of the pears sent, nearly all were decayed, and could not be recognized—the one marked "perhaps Autumn Bergamot," appears externally like Summer Bonchretien, but we could not determine its flavor.

The shoots of the cherry appear like those of Early Richmond, which as we stated some months ago, is probably the variety known as the Early May in Central Indiana.

The branch of the Ohio Everbearing Rraspberry had 67 berries on a length of 10 inches. Our correspondent says he counted the berries on one plant of four canes, and found 518, one cane with 152 berries—in all stages of maturity, the largest three quarters of an inch in diameter—a supply of water and cultivation would have added much to their size. It appears to be a valuable sort at the West, but we should prefer a crop ripening together, as raspberries are not so much desired when we have peaches, plums, pears, grapes, melons, &c.

The Taylor Grape.

We are indebted to SAMUEL MILLER of Lebanon. Pa., for specimens of the Taylor grape, a newly introduced variety, originally brought from the Cumberland mountains, between Kentucky and Virginia. Unfortunately, the box in which the grapes sent us had been packed, was crushed on its passage, and only a few imperfect berries remained. From these, however, we were led to a very favorable opinion of the variety, and think it must prove one of great value. The berries were medium in size, light or yellowish green, somewhat similar in appearance to the Rebecca, and of a decidedly fine flavor-we should think little if any inferior to the Rebecca in quality, judging with so imperfect an opportunity. S. Miller says, in the letter accompanying the specimens, "The grape I send you, after passing from the hunter's hands who found it, has since been in the possession of different persons who did not know its real value. But it is now in such hands as will soon disseminate it. A gentleman who has kindly distributed it free of charge to a number of persons, and who is interested only in adding to the list of our fine grapes, says, "It never has had a blemish or spot, in the same situation with the Catawba and Isabella, when the two latter failed entirely by rot." In size of bunch and berry it is a little less than the Catawba, when well grown. This season, he says, the drought has killed every thing in that part of Kentucky of the fruit kind except the grape I send you, which he had to take off before ripe, as the wasps were eating them. Hardier than Catawba, it is a great grower and good bearer. These specimens were picked on the 15th of August, and come to you after sixteen hundred miles of carriage by land."

BUGGY PEAS.—I am a little surprised that there should be any controversy about buggy peas. I am now in my seventieth year—have been familiar with gardening from my youth up, and have always found buggy peas to grow as well as any. E. H. R. Frederick City, Md.

Hogs in Kentucky.—The Auditor-General of Kentucky has made his official returns for the year, and it seems that there are 815,538 hogs raised in the State this year, against 639,297 last year, being an increase of 176,241 head. This does not seem to indicate that the pork market has used up the stock in that state.



Raising Wheat and Chess.

MESSRS. EDITORS-As the time of wheat seeding again comes round, all facts relating to its culture should be disseminated among farmers who raise this important cereal. When land in this section was first settled, the primeval forests cut down and burned on the land, the potash and other ingredients contained in the wood found their way into the soil, which when sown to wheat, even with the most common tillage, often produced enormous crops. But as a great yield, in those days, was the chief aim among farmers, it frequently happened that not much attention was paid to cleaning their seed; in fact, they then possessed few of the facilities enjoyed by farmers of the present day for separating different kinds of grain from foul seed, consequently the seed wheat was sown in a condition far from clean, containing, perhaps, among others, wild mustard, daisy, cockle, and though last, yet not least, chess. These seeds sown so promiscuously, though at first unnoticed, from the greater luxuriance of the wheat, were still secretly filling the land with seeds, and it was not till the natural fertility of the soil began to give way under such severe cropping that they began to show themselves, and farmers saw when too late that they had been heaping up wrath against the day of wrath, and often very unwittingly too, from the practice among many of pulling out the foul stuff at harvest time, and either throwing into hollow stumps, or on rubbish heaps to get rid of it. Well, in course of time the stumps decayed, and the whole surface of the land was brought under the action of the plow; the seeds then began to show themselves, and as chess happened to possess some of the characteristics of s coming to maturity about the same time, resembling it somewhat in manner of growth, it was the unanimous conclusion of some that chess was nothing more or less than wheat weakened and degenerated by severe freezing and thawing in winter, &c. out entering into any controversy on the often mooted question of transmutation, I will simply state some facts in relation to it, together with my experience in the matter.

When I first began to raise wheat, some thirty years ago, after some thought on the subject, I took the position that if wheat turned to chess then chess would never grow again. But if, on the other hand, chess was a distinct species of grain, then it will grow and reproduce itself again from seed. In which opinion I soon after confirmed by the observations of a most enlightened and enthusiastic lover of truths and facts," who, while an engineer on the Erie Canal, which was being surveyed through this town, found, in passing through a wheat field, from which the wheat had been cut, a head of chess, which had fallen on the ground, that had sprouted and commenced growing. "There," said he, "it has long been contended by the advocates of transmutation that chess would not grow, but here is proof positive right before our eyes which sets this point at rest."

With such data as a starting point, I commenced the task of eradicating chess from the farm I occupied. First. By cleaning my seed wheat as clean as I could by a fanning mill, and afterwards by hand picking. Second By being careful at harvest time to take up all, both wheat and chess, shelling as little as possible, being careful at harvest time to take up to the barn, and threshing all together. Third. When the wheat was separated from the chess and other foul seeds by the fanning mill, they were taken to the mill and ground into feed, a quietus being given to them in this way, hardly attainable by any other save fire. The heaviest portion of the chaff was also taken out and burned, so as to prevent as much as possible, any

ed going out in the manure. Now for the result. After the third rotation, that is, after taking the third crop of wheat from the land, the chess had almost entirely disappeared, only now and then a scattering stalk appearing, and these not exclusively on the low parts of the field where the wheat was subject to be winter killed, but on the higher ground alike, showing that the seed was either de-posited with the manure, or was shelled off at the time posited with the manure, or was shelled on at the time of harvesting a previous crop. And so, as each field was gone over in the above manner, the farm has ceased to produce chess. And now, brother farmers, my advice is, clean your seed wheat as clean as you can, then see that no foul seed is scattered on your land, and your wheat will speedily cease turning to chess. C. Royalton, N. Y.

How to Make Syrup from the Sorgho.

MESSES. EDITORS-According to promise I proceed to give you the details of our molasses making from the Chinese Sugar Cane.

We used an upright two roller iron mill. When the canes were ripe enough, or when about two-thirds of the seeds were turned black, we commenced operations by stripping the leaves from the stalk, and cutting off about one foot of the top. We then passed the canes through the mill, until we obtained about twenty gallons of the juice, which was then passed through a cotton strainer, (perhaps flannel would be better.) Then put about one gallon of juice in a kettle, to which we added about eight tea spoonfulls of soda, (such as is used in cooking,) to neutralize the acid, and about one quart of milk, or the whites of six eggs well beaten, to separate the albumen or mucilage which the juice contains. We then put in the other nineteen gallons of juice, stirring the whole well together. Then applied heat, and when it began to boil, skimmed off the scum as clean as possible. If it boiled too fast, so as to boil the scum under before we could get it all off, we checked the boiling with a little cold water. Then boiled it as fast as possible, skimming off from time to time whatever seum raised on top A lump of but-ter as large as a small hickory nut, put in a kettle,

tends to prevent it from boiling over.

We boiled the molasses which we put up for summer use, until it was much thicker than common Orleans molasses. We then put it in a tub to cool, during which time a thick tough scum would rise on top, which we took off, and then put the molasses in a barrel, and

it has stood the hot weather without any change.

We prefer it to the best golden syrup, and all who

have tried it pronounce it excellent.

We tried milk of lime, (that is, unslacked lime dissolved in water until it looks like milk,) to neutralize the acid, but found it gave the molasses a dark color and a rather unpleasant taste. We then tried lime water, (that is, lime dissolved in water, and allowed to settle until it became clear,) which answered a very good purpose, but we thought the soda preferable, and accordingly used it. IRENE COLE. Flowerville, Ind.

TOP DRESSING MEADOWS .- " D. S. C.," in the Prairie Farmer, thinks top dressing grass-land altogether the best method of manuring farms. The dressing may be given in the fall or winter, when other work is less pressing, and should be most liberal the season before breaking up for a grain crop. All farmers may observe that turning under a good thick sward is of material benefit to the soil, and experiment shows there is no better means of getting such a sward than by manuring on the surface of a meadow or pasture—and no better time for such manuring than in autumn.

^{*} David Thomas of Cayuga County.



The Grasses-Red-top, (Agrostis vulgaris.)

From one of a series of articles on the "Grasses of Northern Ohio," written by Prof. Cassels, of Cleveland Medical College, for the Ohio Farmer, we quote

the following paragraph:

"Were the habits and properties of the Red-top fully appreciated by the grazing farmer, it would be held in much higher esteem than it now is; and when they are properly estimated, its claims to his attention and favor will become more and more apparent. In fact, it is in many respects, preferable to the Herds grass, (Timothy) Phicum pratence—that universally esteemed grass—to those owners of damp cold lands, which are not adapted to the growth of the Herds grass, but when properly managed, are the best for the Red-top. Moreover, even those lands which now afford nothing but sedges and rushes, may be made at little expense, to yield luxuriant crops of *Red-top*, which when cut before the seed is ripe, will be found to be a rich and nutritious hay,

and much relished by cattle and sheep.

"When cultivated for hay, it ought to be grown on damp (not wet) lands—clay lands, with a good dressing of lime is preferable; yet it will thrive on other soils. To obtain the full benefit of its nutritious properties, and its palatableness for cattle, it ought to be cut soon after it comes into blossom. It can be grown to advange after it comes into blossom. It can be grown to advantage with red clover, which adds much to its value as a dry fodder, and may be sown in the spring with oats, giving it a good dressing, either of air slacked lime or plaster, the spring following the removal of the oats, plaster being preferable. When used for pasturage, it ought to be fed so as to prevent its going to seed, as it then loses much of both its sweetness and nutrition."

SANFORD HOWARD, in his essay on "Grasses and Herbage Plants," in the Transactions N. Y. State Ag. Society for 1855, remarks upon two species of Agrostis ru/garis -- distinguished as large and small-major and minor. The A. vulgaris major is probably the same as that spoken of by Prof. C. Mr. H. says: "It yields a large bulk of hay-rather light in proportion to bulk -and although of inferior quality as a pasture grass, compared with some species, it is readily eaten by cattle and horses, and produces a pretty large and regular growth through the season." Of the A. vulgaris minor, he remarks that it appears to correspond to the common Agrostis, or Fine Bent grass of English authors. It is only about half the size of the large kind,- its stalks are very slender, but often stand very thickly together. "It yields," he adds, "a less bulk of hay than the larger kind, and is much heavier in proportion to bulk, and of better quality, being highly esteemed for feeding working oxen. Its greatest advantage over the large kind, however, is that on dry soils, it grows better and lives longer."

In regard to the cuts illustrating the two kinds of Red-top, as given in the Transactions, we must say they do not represent any Red-top we have known under that name. The figure in Prof. FLINT's work on the Grasses, is a better illustration.

In his "Dairy Farming," Prof. FLINT remarks upon the subject under consideration as follows:

"Red-top is a grass familiar to every farmer in the untry. It is the Herds grass of Pennsylvania, while country. It is the Herds grass of Pennsylvania, while in New-York and New-England it is known by a great in New-York and New-England it is known by a great variety of forms. variety of names, and assumes a great variety of forms, according to the soil in which it grows. It is well adapted to almost every soil, though it seems to prefer a moist leam. It makes a profitable crop for spending in the form of hay, though its yield is less than that of Timothy. It is well suited to our permanent pastures, where it should be fed close, otherwise it becomes wirey and innutritious, and cattle refuse it. It stands the climate of the country as well as any other grass, and so forms a valuable part of any mixture for pastures and permanent mowing lands; but it is probably rather overrated by us."

From our experience with this grass, both for pasturage and hay, we are inclined to value it highly, especially for mucky soils, occasionally under water, to which it is far better adapted than Timothy or June-grass, or indeed any other with which we are acquainted. The present year, both Red-top and Timothy were so injured by the great June frost in many places, as to prevent their heading out-our Red-top suffering most from this cause, as it did not produce any heads, while our Timothy in some places gives a light, late crop. Last season the Red-top, though young, gave a good growth of hay, and it promises to make a firm thick sward on our mucky mowing land, where Timothy will not flourish. We should be glad to publish the views and experience of practical farmers as to its character and value, and also in regard to saving and sowing the seed, and its management for hay, and as pasturage.

Leached Ashes for Pears-Experiment.

One year ago last spring I transplanted twelve young pear trees, each about six feet high. I manured them well with barnyard manure, putting it into the hole before transplanting, they all lived, and grew eighteen inches the first year; last spring they all leaved out, and appeared to be doing well, until about the first of June, when four of them gave signs of dying, the leaves began to turn yellow, and the bark to shrivel. I applied barnyard manure but to no effect, I then dug around the trees, and applied liquid manure at the rate of two gallons at each time twice a week, for two weeks, but that seemed to do no good; the trees were just alive and that was all, yet unwilling to give up the contest, I applied as a last resource leached ashes, putting on at the rate of two bushels to a tree, carefully loosening the earth around the tree before putting them on; they began to return immediately, and in eight days were as bright and vigorous as any of the others, and have grown since then six inches. True. Garland, Penobscot Co., Me. JOSEPH L.

We have known instances where the application of leached ashes has produced a surprising effect in imparting vigor to young and feeble pear trees-and other cases where it has done no good whatever-doubtless owing to differences in the condition of the soil. think our correspondent dosed his trees much too heavily with it, and should fear injurious effects. When applied, it should be broadcast, not in a heap at the foot of the stem.

Great caution is needed in setting out young trees with manure, that none come in contact with the roots. Many young trees are killed by fresh manure placed in the holes. If old and well rotted, it is comparatively harmless; and if the manure is well raked into and mixed with soil, and placed at the more remote parts of very large holes, so that the roots will not reach it till the second year, when it has become well diffused through the soil, it will in most cases be very beneficial. There are so many instances where ashes are useful to fruit trees, as to induce their recommendation as a component part of all composts for trees, one of the best of which we have found to be about equal parts of barn manure and turfor peat, and about one-tenth to one-twentieth part ashes. Such a compost as this, rotted half a year or more and well broken up and mixed, and applied to the very remote parts of large holes would be very safe and highly useful.







Why does our Rural Population Decrease?

MESSES. EDITORS-Your correspondent in the Co GENT., of August 18th, under the head of "Rural Faults," writes in the main very truthfully and sensibly upon the subject. As in the agricultural counties in the Empire State, so it is in the rural districts of New England; there has been a decrease in numbers within the last twenty years, of those engaged in farming, and an increase in villages, large towns and The time was when the cultivation of the soil cities. was the main business of the people, and but very few young men brought up and trained to the business, ever expected to resort to any thing else for a living. But those times have changed; manufacturing, railroads, &c., have revolutionized the whole business of the country, inviting to the pursuit of wealth in various channels, unknown to the youth of twenty years ago. To be rich, and to be rich in a hurry, is now the feverish anxiety of all "young America." The slow, but sure process of reaching a competency, by culti-vating the soil, has no charms for the thoughtless multitude of the present day, though not one in ten of those that leave the farm for a more lucrative business, will at the meridian of life be one-half as well off as he might have been had he never sought the change.

This is a lamentable fact, and the growing evil of our day and generation. The would-be lawyer, doctor, merchant, divine, or city gentleman, have a hard road to travel, and must learn, when too late to re-trieve their fortunes, that there is truth in the old adage, that "all is not gold that shines."

There is too much truth in the comparison drawn by your correspondent 'Onondaga," betwixt the manu-facturer and farmer; while the former is constantly and vigilantly seeking the aid of a practical science, the latter is a disbeliever in any such "humbug," and is content to go along in the beaten track of his fathers. But I should be sorry to believe that the farmers of this country, as a class, are so wanting in common sense, and so lost to all decent propriety, as to be "ashamed of their calling." I think your correspondent misjudges them in this particular. The majority of men in all ages, in all countries, civilized majority of men in all ages, in all countries, civilized as well as barbarous, have ever been, and ever will be, improvident and reckless. This, to me, is a satisfactory reason why they do not, and why they will not exercise the reason and judgment that God has given them, for their own best good. Thus the reckless love of adventure and hazard, induces them to relinquish a certainty for an uncertainty, when the chances are against them; like the youth who teased his mother at an improper age, for permission to go to the theatre, and received for an answer that she had seen the folly of it, said, "well, I too want to see the folly of it," and this folly they do see and feel often, to a sad old age, with the hand of necessity pressing upon them.

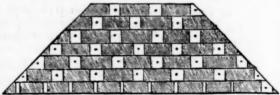
Another potent reason for leaving the farm is, the

desire of companionship and company. The farm is dull, too isolated; congenial associates are not always at hand; fun and frolic they must have; recreations that are exciting charm the fancy, and flatter the imagination, and thus we see the large towns, cities, and even villages, filled to overflowing, the professions all crowded, trade overdone, while our farms are neg-lected and languishing for want of the necessary labor sary labor to keep them in a productive condition. How many thousands of our foreign population will clan together in the cities, and beg, steal or starve, before they will resort to the country to obtain work upon the farm? The love of distinction, and the hope of eminence in the chosen pursuit, has much to do in fanning the flame of a visionary imagination. But, alas! how few realize a tithe of the fond hopes of their youthful dreams, or the expectations of indulgent and doting parents. J. W. Colburne. Aug. 26, 1859. Growing Strawberries on a Mound.

EDS. OF THE Co. GENT.-Having made this spring what may be termed a "Strawberry Mound," in accordance with the plan of one which I saw in the garden of a friend about two years since; and being so much pleased with it thus far, I have concluded to describe it, so that others who may approve of the plan, and be willing to incur the expense, may give it a trial. In theory, there does not appear to be any requisite wanting for success, the advantages being, that when the plants attain full size, neither grass nor weeds have room to grow, the runners cannot take root, the fruit is kept clean, water, or manure in a liquid form, can be applied in any quantity, by means of the basin on the top, evaporation is prevented by the brick pavement, and, lastly, the fruit will be earlier, in consequence of the ground getting warm sooner in the spring.

As my mound has only been made a few months, would take longer time for that. I may, however, remark that my plants were obtained from Rochester, N. Y., and set out on the twenty-fifth of the third month (March) last, and in just nine weeks from planting, we gathered ripe fruit from them, full three inches in circumference. Nearly all the plants have fruit, (they are of the Y. there has not yet been time to test it practically, as it inches in circumference Nearly all the plants bore fruit, (they are of the Hooker variety,) and now the vines are larger and more vigorous than some of the same lot set out in an ordinary bed, and no other

difference in the treatment.



The mound may be round or oval, as may please the fancy. Mine was made in an oval form, in consequenc of there not being sufficient room where I wanted it for a circular one. They may be made of any length, but probably on account of the facility for watering, by means of the basin at the top, it should not exceed something like nine feet in width at the base. Mine is nine by twelve feet at the bottom, two by six feet at the top, and about two and a half feet high, the sides sloping at an angle of about forty degrees, containing two hundred and seventy-five plants in thirteen rows. Soil in which there is a good deal of vegetable matter, such as an old fence chopped fine, would be a good material. Then, when the mound is shaped, pave the sides and top with hard brick, leaving a space of about four inches between each two bricks. Fill this hole (four inches square,) with rich earth, leaving the earth in the hole about horizontal, and set a plant in each, according to the above diagram.

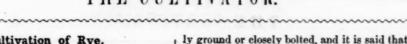
While the vines are green, it makes quite an ornamental affair for a plat or square in the garden. CALEB STABLER. Dayton, Mont. Co., Md., 8th Mo., 12.

BRINE POISONOUS TO ANIMALS.—Several years ago, Mr. REYNAL, an eminent French veterinarian, urged that the brine in which pork and other meats had be pickled, was a deadly poison to horses and hogs. In proof of this, the Kentucky Turf Register says, "We were last week a personal witness to its practical de-monstration. A gentleman in the village of Lawrence-port, Ind., emptied brine from a pork barrel into his lot. A flock of hogs, as also one horse, partook of it, and the result was, the horse, and seven hogs out of the nine, died in less than six hours from the time the bar-rel was emptied."









The Cultivation of Rve.

Looking into the statistics of the rye crop some time ago, we gathered some facts in regard to culture and uses, which may be of interest to our readers. We find it a prominent crop in the Eastern States-in amount superior to all the grains except Indian corn - and consumed largely as a breadstuff. It is grown quite extensively among the Germans in Pennsylvania, and also on the light lands of Ohio and Michigan, and other Western States. In some localities in the latter section, however, one object of its growth is the supply of winter pasture, as it may be fed down for some weeks in spring, with very little diminution in the product of grain, and affords a succulent green food at a time it can be obtained from few other sources.

The soil best saited to rye, in our experience, is a rich, sandy loam-the strong clays in which wheat delights seldom producing good crops of this grain. In such soils there is too much moisture—it better loves a warm light sand or gravel, too light for good crops of barley or oats. Good corn land will produce good rye, and it is often sown after this crop, the last of September. Sward land of the proper character of soil, is also employed in the production of this grain.

Probably the best preparation for sowing rye is a thoroughly tilled summer-fallow. Rye likes a deep, mellow soil, and one enriched by manure; and among the fertilizers which may be employed, a compost of muck and ashes would be very suitable to the requirements of both the soil and the crop. If stubble land is employed, manure should be given, unless the previous crop has received an extra dressing. Plow deep and well, and then by the use of the gang-plow or cultivator, secure a fine and mellow soil.

The middle of September is a favorable time for sowing and from one and a half to three bushels of seed are given per acre. The earlier it is sown the more it tillers and spreads, and hence the smaller quantity will be enough on a fertile soil, if sown at this season. When the growth is luxuriant, it may be fed off both fall and spring; but where much reliance is placed on this supply of pasturage, the greater amount of seed should be sown, and the better character of land given.

Rye, like most other grains, should be harvested before it is fully ripe; as, with wheat, the grain is heavier, and the product of flour of greater amount and value; heside there is considerable loss from shelling in the field if delayed too long. Careful handling is necessary-we have known large wasteage, when drawn by careless hands when very dry and ripe.

The average yield may be stated at twenty bushels per acre, though crops of thirty five are occasionally produced. Very often, however, a yield of fifteen bushels is as much as a heavy crop of straw will give, especially on land not well adapted to the crop from too great an amount of moisture. Its market value is usually a little above that of Indian corn-sometimes, however, it goes slightly below it, according to the crop of each.

Rye bread is esteemed a wholesome and palatablefood, altough those accustomed to that made of "pure Genesee wheat," find it quite a different article. When mixed with Indian meal and baked a long time, it makes the famous "Rye and Indian" so well known in New-England, and which we seldom find in so great perfection elsewhere. The flour should not be too finely ground or closely bolted, and it is said that an aroma will be retained which is peculiar to this grain, and which renders it more palatable. It has a larger per centage of sugar than wheat bread, and retains its freshness longer even than that made of spring-wheat flour. We have noticed recently a statement by an extensive bee-keeper at the west, that rye flour is a valuable article for feeding bees in early spring, before flowers blossom sufficiently to supply their demands for

Rye is pronounced by competent authority a most valuable grain for feeding horses, cattle, and swine. For horses at hard work, and requiring hearty food, the Pennsylvania farmers give both grain and straw, the former coarsely ground and the latter cut, and both mixed together in a moist state, with good results. Less hay is eaten, and no other grain is required. Corn is sometimes ground with the rye, making a superior food for improving the coat as well as keeping up the strength of the horse. The same provender is valuable for fattening cattle. As early feed for swine, before the corn crop matures, we have used rye with the best success. By straw is not well relished by stock, yet in some

best part of the crop. In Boston, it is said the price averages \$15 per ton, though it is chiefly used for the bedding of horses. It is used to a considerable extent by nurserymen for packing trees, and we have found it excellent for littering yards and stables, and to add to the steel of menurary trees.

the stock of manure.

Saving Clover Seed.

Properly managed, the saving of clover seed is no difficult matter, but many farmers must reform their practice in two respects-they must cut it earlier, and get it in sooner-as soon as it can dry sufficiently. A correspondent in one of the earlier numbers of the present year, (Co. Gent., March 3, '59,) gives cogent reasons for this recommendation, which we recall as seasonable just now. He says, "early cutting will often give better weather for curing; will prevent loss from shelling of the earliest and best seeded heads, and will give the straw and chaff much greater value as fodder for stock. We need not wait, I find, for all the blossoms to ripenthe later ones have little or no seed, and may better be cut green, so as to possess some value as hay. If merely allowed to lie in the swath until well wilted, the clover seed is cured sufficiently to draw at once to the

When two-thirds of the heads have turned brown, is probably about the best time for cutting. A writer in the Southern Homestead says, that earlier, too many seeds are unripe, and later, much seed is lost in the field. He would cut with a reaping machine or cradle, turning the grass into double swaths to cure. We usually cut with a scythe in the same way, or if with a reaper, rake off in small bunches of a size to dry through readily. When cured, rake up when slightly damp, morning or evening, into small bunches, or pitch together with a barley-fork, and when sufficiently dry load carefully, and draw in. Let the moisture all dry off the grass before drawing in, or it will be liable to heat in the mow; but a little juice in the green stalks or leaves will do no harm.

In the freezing weather of winter, threshing and cleaning with the machine is readily performed. Or, if grown only for home use, it may be threshed with the flail, or trodden out with horses, and sown in the chaff, which is full as certain to "entch" as though cleaned ever so nicely. Farmers should raise their own grass seed when it is possible, and thus avoid seeding their farms to foreign weeds of different kinds, too often contained in grass seed bought at the seed-stores.



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Bestow Something on Your Land.

MESSRS. TUCKER & SON—As an explanation of the the above, I would state that an Irish gentleman, in making a tour in this country, called on me some twelve years ago. I found him very conversant on agriculture, and of course felt interested in him. After I had showed him all my growing crops, (wheat nearly ripe,) he said: "surely this is very grateful land." I asked him what he meant by that. He said, "sure you must see it recompenses you abundantly for what you bestow upon it, and it surprises me that other farmers don't bestow as liberally upon their lands, for surely where nothing is bestowed little can be taken from it."

Could I only write like a Webster, a Clay, or a Calhoun, I am sure I could convince farmers that it would be greatly to their profit to bestow more upon these lands. It would recompense them abundantly to bestow more dung upon it. I suppose polished writers would say apply ammonia, but every farmer understands what dung is, and many either-don't know what ammonia is, or don't know that fermented dung produces it.

It is a fact, that good wheat crops cannot be raised on our lands here, unless dung is liberally applied. Bestow more labor upon the land, and it will recompense you abundantly. Land requires more labor now than it did when we had a virgin soil to till. It must be better or more thoroughly pulverized to make it produce good crops. Bestow lime upon the land, where it can be got at a reasonable rate. Bestow gypsum (plaster) liberally; it costs only a trifle; makes grass grow abundantly; makes cattle and sheep relish it, the grass or hay, better, and I have no doubt makes it more nutritious. Bestow salt to your growing wheat and barley. It makes a stiffer straw and a better sample of grain, and more of it; but first of all, bestow draining where needed.

At the same time you commence bestowing upon the land, begin bestowing upon your cattle and sheep; they will recompense you abundantly for what you bestow upon them. Bestow good feed, (good shelter in winter,) plenty of water, dry yards, and plenty of litter, and they will pay you abundantly. Bestow meal liberally to your fattening cattle and sheep. Bestow more or less meal to your store cattle and sheep through winter, according to the quality of your fodder, and they will pay you abundantly—your sheep two or three times over—lst, in wool; 2d, in the cancass; 3d, in the additional number and better quality of lambs raised Bestow liberally on your stock. In that way you are preparing to supply your land liberally with the food it needs and must have, to make it grateful. This I have practiced for a long, long time, and I know I am right in advocating it. I advocate nothing but what I have practiced and found profitable. Mind to cultivate your corn when very young; when it gets older it will take care of itself. But I write as if every farmer occupied a clay soil like mine; but bestowing thorough cultivation on other soils I think don't hurt them, neither will the bestowing of dung. John Johnston. Near Geneva, Aug. 20.

Grubs in Sheep.

A correspondent of the Michigan Farmer communicates to that journal what he says is a perfect cure for grubs in the head of sheep:

"Take one quart of whiskey, and two ounces of yellow souff, mix and warm to blood heat. Let one man hold the sheep, and another take a small syringe and discharge about a teaspoonful of the mixture into each nostril. It is a certain cure. My father met with quite a loss in his flock; he tried this remedy, found it satisfactory, and never lost another sheep."

Selection and Use of Muck.

EDS. Co. GENT-The question is often asked, "Why this wide discrepancy in the results produced by muck in the hands of different experimentors?" The answer is sought in the different modes of using it, but er of the different muck deposits varies greatly. Most muck, as it comes from the swamp, is not decomposed. There is a process by which vegetables so far decay, as to lose all strength and firmness of film, so that they will fall to pieces in your hand, and yet have not suffered that decomposition which fits them for food for other plants. True, decomposition requires heat, moisture and air, and all in proportions. Hemp and flax are often "rotted" in cold water. Leaves may be found in quantities in " rotted proportions. Hemp and make an extension old water. Leaves may be found in quantities in brooks and shallow water, retaining perfectly their form, and yet so "rotten" that they yield to the gentlest handling; but they are not decomposed, moisture has been in excess, while, probably both heat and air have been deficient. The gum and other extractive matter have been dissolved out, and if any chemical action has taken place, it would seem to arise from the decomposition of a small portion of water, giving off its bydrogen and taking the oxygen, and forming an acid. In this condition most muck is found. It is a mass of sour vegetable matter decayed, but not decomposed, and must be exposed to the action of heat and air before it is prepared to nourish vegetable life. This is a wise provision of nature. Did each animal accumulation suffer a full decomposition, its valuable parts would be taken up, and rendered by water and atmospheric agencies to a far greater extent than at present. Those shallow muck deposits, which than at present. are dry some months in the summer, usually act more readily, but less permanently, than the deeper deposits. It is a question, also, whether the brier orders of plants—the nitrogen bearing plants, which abound in deep swamps, do not give a richer muck than leaves and vegetables of a higher order.

But there is another thing which influences the character of muck in a very high degree. I refer to the rocks and rocky portion of the soil on the hill-sides surrounding the deposit of muck. The man who has not often knelt on the surface of a rock, or on the upturned soil, and looking, looked to see how the frosts of winter, and the warm suns of summer, and the chemical changes of the atmosphere, were crumbling and disintegrating, not only the face of the massive ledge, but the smallest pebbles of the soil, and preparing mineral or inorganic food for vegetable life, has lain unmindful of one deep source of gratitude due to his Creator.

Very firm rocks or stones are made of a single ingredient, and no matter how indestructible one of the parts may be, if it is combined with a destructible ingredient, the mass will crumble. Very many rocks take a little iron into their composition. The particles of this will become rust, and be washed out; water will fill the cavity, and freezing expand and crumble off the particles around it. Some of the lime stones decompose rapidly from this cause. Granite is composed of quartz, feldspar and mica. Pure quartz is affected but from charcoal agents, but feldspar contains eight to twelve per cent of potash; mica also contains potash, and both are highly conpound, often decompose readily, and give their ingredients to the soil. Mica slate—a very common rock—abounds in mica, and often, perhaps usually, contains some iron. The most valuable beds of muck we have ever known, receive the wash of grounds whose rocks and stones were rapidly decomposing, and whose decomposition afforded potash or its kindred elements. Any alcalithus deposited with the muck should in a measure, at least, prevent the formation of acids, and render it to some extent similar to that which has been composted with ashes. These suggestions may aid some one, both in the solution and treatment of muck. S. Reed.







In answer to several inquiries, we give the above cut representing the mode of constructing wire trellis for grapes, as adopted by Dr. FARLEY of Union Springs, in his excellent vineyard at that place. The posts are white cedar, mostly round and rough; they are set in the ground about two and a half to three feet, are seven feet high above ground, and twelve feet apart. At the ends, they are braced as represented on the left portion of the figure, the powerful stress of the wires requiring a firm support. The wire, which is No. 10, is placed about 14 inches apart, the bottom one about two feet from the ground, and the upper about six and a half to seven feet high. At the ends, the wires pass through or around the posts; they are attached to the inter-mediate ones by staples. The vines are trained on this trellis mostly in the fan form, and where necessary are fastened to the wire by cotton cord.

The cost of this trellis is 75 cents to one dollar per rod. The cut represents only one length between posts, besides the end-bracing.

Agricultural Transactions.

TRANSACTIONS OF THE N. Y. STATE AGRICULTURAL SO-CIETY, with an abstract of the Proceedings of the Coun-ty Agricultural Societies for 1858. Vol. XVIII. Al-bany: C. Van Benthuysen, 1859. 8vo., pp. 855.

The recently published volume of our State Society's Transactions, prepared under the direction of Col. JOHNson, the able Secretary of the Society, is one of the most valuable which has appeared, and the contents are of especial importance. These volumes convey the experiences of our best farmers, and we are glad to know that they are not only highly valued and appreciated by the people of our own State and Country, but that abroad they are received with favor and sentiments of gratitude, as we have evidence in letters which are received from the most eminent and practical cultivators in Great Britain, by the Secretary of the Society.

Besides the abstracts of the doings of the various County Societies, and the farm reports, the present volume contains several valuable papers, which we will briefly mention: The address of JOSEPH R. WILLIAMS, Esq., President of Michigan Ag. College, on "Agricultural Education;" "Edible Fishes of New-York," an essay by ROBERT L. PELL, which received the \$100 premium of the Society, upon the "Natural History, Habits, and Artificial Culture of our Edible Fishes" it is a useful article; "A Treatise on Fencing," by S. EDWARDS TODD, follows-this is copiously illustrated, and is written in a plain common sense way. An interesting article is given in the report of experiments with different manures on permanent meadow land, as made by J. B. LAWES, F. R. S. It will be found of special value to graziers and dairymen. Dr. Fitch's fifth report on the "Insects Injurious to our Forest Trees," will prove of great value to all who take an interest in the preservation of our forests. Dr. GERS-TACKER, an eminent entomologist, in speaking of the

reports of Dr. Firch, says: "If the Society had done nothing beyond the publication of these studies respecting insects injurious to trees, it would have made an ample return for all the money it had ever received." The condensed reports of our County Societies and correspondence, contain much useful information.

Such is a brief abstract of the contents of this volume. It is well printed, and illustrated with several portraits of the finest stock in our State. For the volume we are indebted to the kindness of Secretary Johnson.

Black Tongue.

MESSRS. LUTHER TUCKER & SON-Do you know anything of a disease in cattle called Black-tongue? If so, what are its symptoms? Is it generally a fatal disease? What is the most successful treatment of it? Is there danger to persons using the milk of cows that may be taking it, though not far enough advanced to discover it? J. A. GALBRAITH. Greenville, Tenn.

Black tongue, according to Dr. Dadd, is the most evere form or termination of Blaine. The following are his remarks on this disease :

BLAINE.—Some veterinary writers describe this disease as a "watery tumor, growing at the root of the tongue, and threatening suffocation. The first symptoms are foaming at the mouth, gaping, and lolling out of the tongue?"

The disease first originates in the mucous surfaces, which enter into the mouth, throat, and stomach. It partakes somewhat of the character of thrush, and requires

which enter into the mount, takes somewhat of the character of thrush, and require takes somewhat of the character of thrush, and require mearly the same treatment.

Make an infusion of raspherry leaves, to which add a small quantity of borax or alum. Wash the mouth and tongue with the same by means of a sponge. If there are any large pustules, open them with the point of a penknife. After cleansing them, sprinkle with powdered bayberry bark, or bloodroot. Rid the system of morbid matter by injection and physic. The following antiseptic drink will then complete the cure:

Make a tea of raspberry leaves by steaping two ounces in a quart of boiling water; when cool, strain; then add Powdered charcoal.

2 ounces

bayberry bark, 1 ounce

Honey, 2 table-spoonfuls

We would advise no person to use mitk from a diseased cow, but we cannot say how great the danger would be.

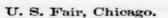
Lemon Pie.-No. I.

One lemon, one teacup of sugar, 2 eggs, 3 tablespoons of flour, I teacup of milk. Grate the rind of the lemon; put the sugar, flour, rind, the juice and the yolks of the eggs together; add the milk the last thing. Pour this custard into a deep plate lined with a paste and bake. When done, spread over the top the whiles of the eggs beaten to a froth, and sweetened with 4 table spoonfuls powdered sugar; then return it to the oven and brown slightly.

Lemon Pie.--No. 2.

One large or two small lemons, 3 cups of sugar, two-thirds of a cup of flour, 2 cups cold water, 2 eggs, a piece of butter the size of an egg. Put the flour, sugar, and eggs together, then add the juice, grated rind and water, and the butter (melted.) Bake in a deep plate without an upper crust. L. E. R.





[Correspondence of the Country Gentleman.]

CHICAGO, Sept. 15, 1859. EDITORS Co. GENTLEMAN-The great Fair of the U. S. Ag. Society is now in full operation, and in extent of stock, implements, and other articles, is decidedly, I think, superior to any other ever held by the Society. The grounds are much too large for a ready examination. The stock are arranged in stalls around the outer fence of a 60 acre enclosure, and you can well imagine what a walk is required to encompass this feat. In fact a day might well be employed if anything like an examination be made of the cattle and horses in their stalls, and in no other way can the examination be had except by occupying three days, when they will be exhibited in the trial rings. To facilitate, however, this work, an omnibus line has been started in the grounds, to pass round these stalls, so that a ride will relieve somewhat the tedium of the way. The arrangements were not fully completed on Tuesday night, but every effort was made to have the buildings open for examination, and the exhibition was in progress on Wednesday. The stock of cattle was in the main, I think, a very superior one. Many very choice cattle of the various breeds were shown, and he must be fastidious indeed that could not be satisfied with superior animals exhibited in each of the classes. The show of implements was a very excellent one, and did great credit to the exhibitors to the Society; and I consider, in variety, extent, utility, and adaptation to the wants of the farmer, I have never seen this exhibition surpassed.

The Horses were a failure so far as anything like first-rate quality was concerned. The Sheep and Swine however made up for the deficiency in horses. The miscellaneous department was not what could have been desired, yet taken together, under all the circumstances, was very fair. The people, however, were here in all their power. On Wednesday 30,000 were estimated to be on the ground, and the receipts, over \$6,000, would seem to justify that number. On Thursday the numbers in attendance were variously estimated from 40 to 50,000. As I have not the receipts at the gate, I cannot say whether these estimates are too large, but it is very evident there were many more than yesterday.

Fawkes' Steam-Plow, and a new competitor, Waters, from Detroit, were on the ground to-day, and turned up furrows enough to show what can be done. Waters is first tried here—and cutting; as it did, about fifteen feet in width and six inches deep, and turning over the sod well, my own impression is, it gives hopes of success. I cannot give you a description of it, but I think well of its start. To-morrow the plows will be tried, if land can be secured, for the prize of the State Society, the Illinois Central Railroad, and the United States Society, and the interest in the success of the machines is very great. May the result be propitious, and the great West satisfied that their expectations are to be crowned with success.

The receipts up to this evening, I judge will be nearly if not quite \$18,000—and if to-morrow and Saturday are favorable as to weather, the receipts will probably exceed \$25,000—and this, after paying premiums, would place the Society in funds—unless the large expenses, outside of the liberal contributions of Chicago, shall very materially encroach upon the funds.

The opening address of President TILGHMAN, the responses of Gov. CRITTENDEN of Kentucky, and Senator Douglass, were very happy and well timed, and up to this hour, all things have gone along as well as could have been expected.

I have constantly been engaged on committees, and have had little leisure to examine critically many things, which I hope to do to-morrow I have met old friends from every section, but New-York. I find men in all

the west, who meet me on the grounds and in the streets, and I feel that though this is a great country, we are brethren still, and New-York is remembered with great interest by those who commenced their career there, and are now among the active and efficient farmers, merchants and mechanics of the Western States.

chants and mechanics of the Western States.

The officers of the society present—Gen. Tilghman, Prest; Hon. Henry Wager, Chairman Ex. Con; Mr. McGowan, Penn., Mr. F. Smith, of New-Hampshire, Mr. John Merryman, Maryland, Member of Com., Ex-Prest. Wilder, Mr. Brooks, V. P., Mass., Mr. Johnson, N. Y., Mr. Kennicott, Ill., Mr. Byington, Iowa, Mr. Poor, Sec., Mr. French, Treas., Col. Capron, Supt., and many others, whose names have escaped me for the moment, are all engaged upon the business of the Society. I must not forget Col. Ware, of Virginia, who has done good service during the whole Fair. I regret that I have not time to give more details which might be interesting, but hope to do so hereafter.

The United States Fair closed its seventh annual exhibition, at Chicago, last Saturday. The attendance was large throughout, and the receipts heavy; the three first days it being \$18,000, and the fourth day over \$10,000. The show and trial of steam plows was one of the important features, the result of which has not been learned. [P. S.—We learn that the entire receipts amounted to about \$30,000.]

Dayton and May Wheat.

THE DAYTON WHEAT.-L. Braden, of Junius, Seneca county, gives in the Rural New Yorker, his experience for the two seasons past, in growing this variety of winter wheat. The seed he obtained in Ohio, and sowed it the last days of September; the result was, it was fit to harvest as early as the Mediterranean. "The last season," he says, "I sowed the 1st and 2d days of September-harvested July 13th. The yield of the present season has been good-from 30 to 47 bushels per acre. While the Mediterranean was all down, the Dayton stood up and was nice harvesting; that, I think, is one very important item for every farmer, and another is, it belongs to the white variety of wheat. Mine has been grown on land previously planted to corn, then barley, then wheat, and rather light land at that, with but little manure, and the yield this year is 30 bushels to the acre for 13 acres."

TENNESSEE MAY WHEAT.—This variety, which is identical with the Missouri wheat grown by John Johnston and noticed heretofore in this paper, receives the following notice in the same paper. Mr. James White, of Palmyra, N. Y., raised the present season 25 bushels per acre, sowing it after corn, on the 23d of September. He calls it the *Tennessee May Wheat*. The berry is small, color amber, or between red and white, straw stiff and short, and will bear to be sown upon stronger land than the Mediterranean. Mr. W. adds:

"When sown the 25th of September, it was ready to cut 8th July. It seems inclined to head out very early, (some of mine was in full head on the 10th of May,) which 1think will be its principal advantage over the Mediterranean in escaping the midge. I suppose that there is not a question about its flouring qualities, as it is well understood that the fancy brands of early southern flour are made from wheat of this variety. I do not think it will be likely to yield quite as heavily as the Mediterranean, or other coarse kinds, but should it prove earlier upon further trial, will be valuable, as the midge, even this season, was very abundant in all late spots in fields of the different kinds of wheat grown about here, but came too late to do much damage."



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The Kent County Show, England.

In the letter of our associate, published this week, will be found a brief notice of the Cattle Show of the County of Kent, England. From the full account of the exhibition, together with the report of the dinner speeches, published in the Kentish Journal of Aug. 27, we make the following extract:

The noble Chairman (Lord Sondes,) after returning thanks for a complimentary toast proposed by the Marquess Camden, concluded by giving the health of Mr. Tucken, an American gentleman, the editor of the Country Gentleman, who had come to this country to acquire information on the subject of English agriculture. (Cheers)

Mr. TUCKER, in responding, said it was only yester-day that he left a town in the midland counties, not perhaps as celebrated as some others in the annals of war or history, for the genius of its sons or the grandeur of its scenery, but still it was a household word the world over, for where was there a thirsty soul who had not laved his parching lips with the ales of Burton-on-Trent? (Cheers and laughter.) To come from Stafford-shire to Kent was only like stepping from the brewery to the hop-garden; and in acknowledging the kindness than had shown to him he must thank them for every haps as celebrated as some others in the annals of war they had shown to him he must thank the em for every draught of ale which his countrymen had drank, flavor-ed with the product of the tillage of the agriculturists of Kent. (Cheers.) The Chairman had alluded to the fact of his having come to England to look at their agriculture, and he might take that opportunity of ac-knowledging that hospitality which had enabled him to see something of English agriculture, as he hoped to his own advantage, and as he should endeavor to render it to the advantage of his countrymen. (Cheers.) The agriculturists of England had lavished their capital with a liberal hand in the advancement of that science. They had sent to the farthest climes for fertilizers to apply to the soil, and they had sent to America for cake to feed their cattle and sheep. From every field tainted with the suspicion of wetness the surplus moisture was car-ried off, and sometimes conveyed to early meadows with advantage; and by working up the heavy clay and its application to the sandy soils, they had recreated or redeemed, agriculturally, the island in which they lived. (Cheers.) Under these circumstances the foreigner could not but study with advantage the system of agriculture followed here, even although it might not ans if transferred to distant soils and under different skies. (Hear, hear.) He should not only carry back the le ons of farming which he had learnt in England, but also the more delightful recollections of that and similar occasions when such kind regard had been shown to him as the representative of their brethern in America; for, like Englishmen, they looked back to the glory and achievements of olden time, and he hoped America might regard herself as an ally with England in support of free institutions and of true liberty wherever it might find an assailant. (Cheers.)

Wheat and Chess.

THE FIVE HUNDRED DOLLAR PREMIUM NOT CLAIMED.

Early last autumn we agreed to offer such a premium for a stalk of wheat and chess from the same root, as the owner of such a specimen might desire. The amount of this premium was subsequently fixed at *Five Hundred Dollars*—the applicant to deposit one hundred at the time he made the application, as a guard against needless annoyance; if the specimen proved gequine, the hundred dollars was to be returned to him, with the five hundred; if it proved to be an imposition, he was to forfeit the hundred.

We have heard of several specimens such as the pre-

mium was offered for, but not one of the stoutest advocates for transmutation has had sufficient confidence in his own theory, to make the deposit required, and which there was no danger of his losing if he was right.

The time has now expired for which the offer was to continue; and as we have repeated it several times, and for a whole season, we take it for granted that all the specimens of which we have often heard, are humbugs, and we hope none will hereafter claim that such have ever existed.



Alden's New Cultivator

We have recently made a thorough trial of Alden's new Thill-Cultivator, and find it an admirable implement. The use of the thills gives an efficiency, thoroughness, and accuracy in working, that render it in this respect superior to any other cultivator we have tested. A man with a horse will do twice as much work in a given time on stiff soils as with the common cultivator; and the perfect control which the operator has of its depth of running, and the closeness with which he may cut to the rows without danger of striking or injuring the plants, almost supercedes the use of the hoe in any case.

The engraving nearly explains itself—the horse is attached to the hook in front of the teeth, the thills being merely to steady it. It is more easily managed than the cultivator of common construction, is less fatiguing to the operator, and appears to be easy for the horse. With Sayre & Remington's excellent steel teeth, we would recommend it to our readers as the best cultivator we know. It is made by Milton Alden of Auburn, N. Y., at a moderate price.

Remedy for Twitch Grass.

This is one of the thousand and one names by which this pest is known. Several years ago I had a piece of land that wafted to be taken up, but it was so full of the roots that I dreaded the job; but about the same time I saw a piece in an agricultural paper, that the editor had killed it by planting the land to potatoes, and after they were dug he turned a drove of pigs into the field. So I tried it, and with perfect success. The land was so full of roots that I got but a small crop of potatoes, but the next spring when I came to plow the land, there was none to be seen. If any farmer has his farm as full of it as mine was, let him try this and he will gain two things—fatten his pigs and rid himself of this pest. SAGADAHOC.

To Prevent Cows Kicking.

My plan to prevent cows from kicking, I think much better than J. C. R.'s in Co. Gent. of 25th of August, or at least more easily applied. The a cord or small rope around the body of the cow, just front of the hips and udder, drawing it pretty tight, when you can go to work milking without fear or trembling. In time the cord may be merely laid over the animal's back with the desired effect; at least such has been my experience. W. W. G. Woodbury, N. J.



THE CULTIVATOR.





MESSES. TUCKER & Son-I take the liberty of addressing you, to state some facts which might probably satisfy B. L. S.'s inquiry in No. 7 of the Country Gentleman, concerning the raising of cabbage seed.

Having been for some time in the employ of Messrs. J. G. Meyer & Bro., in Ulm, Germany, where seed growing was the most extensive part of the business, I cannot, so far as my own experience goes, agree with what the Prairie Farmer has seen asserted.

For the sake of experience, it had been tried for several successive years to raise seed of the Brassica family, (Br. rapa virridis caulorapa, khbrabi excepted,) of stumps, but there was little difference, if any, in the size or quality of the cabbage raised from such seed, and from such where the cabbage had been planted out with the head. The only difference is in the seed itself, which don't pro duce quite as much quantity from stumps, and the size is not quite as fine and large as that raised from the whole cabbage plant. But it is a well known fact that the small sized seeds of German stocks, balsams, etc., make more double flowering plants than the single, and are equally thrifty. So it is, to my knowledge, with such cabbage seed. If there is no superiority, there is at least equality in the result of either planting. With us, however, the supply of cabbage in autumn was always larger than the demand, so we as a general thing planted out cabbage with the head on.

With the raising seed of the Savoy, of which immense quantities are raised in Ulm, and for which this locality is justly celebrated, it was different. The heads being always in demand, and often sent off in quantities to great distances, they were all taken off, and of those which had been the finest heads, the tops of the stumps were marked with a cross cut, to be saved for raising seed.

When frost set in, these stumps were removed to the cellars, planted out in spring, the weak growing branches broken out, and the result is a quality of seed which, wherever Savoy is known and cultivated, is celebrated and preferred, and never produces clump-footed Savoy on that account.

In this manner all the Savoy seed has been raised in sized seeds of German stocks, balsams, etc., make more

and preferred, and never produces clump-footed Savoy on that account.

In this manner all the Savoy seed has been raised in Ulm for quite a number of years, and if the Brassica sabanda (Savoy) gives such results, I don't see why Br. capitata of the same family, should be doing the contrary.

L. P. Bloomington, Ill.

Potato Yeast.

We can all appreciate good bread, and I believe almost every person knows good bread from poor. I think once I have seen an exception, for the family with whom we boarded never had good bread upon the table, and never made any remark about the bread, so I conclude it was a thing unknown to them. If at any other table they met with the article, (good bread,) it must have been con sidered something else than bread. But you cannot have good bread without pains taking. The most important thing next to the flour, (which I take for granted is good,) is the yeast. I have used various kinds of yeast, and have come to the conclusion that the potato yeast will invariably insure you good bread if you have good flour. Take two quarts of water, and cut into it six large potatoes, (peeled of course;) let them boil till soft, then pour the boiling water from them on a pint of flour; mash the potatoes and rub them through a seive, then add half a teacup of brown sugar, a tablespoon of ginger, a table spoon of salt. If this mixture should be thicker than the spoon of salt. If this mixture should be thicker than the ordinary hop yeast, pour ir, some hot water to make it as thin as you wish. When nearly cold add the yeast. I use two cakes of the "Groton yeast," which I suppose to be equal to a teacup of good hop yeast. When light, put this into a jar and set in a cool place. When taken out for bread it should always be stirred well. For four good sized loaves of bread I use one pint of this yeast and one quart of new milk. The bread can be made at night with new milk, and will be ready to bake early in the morning. It should be well kneaded and soft. Half water can be used if you have not milk. This yeast will keep three weeks. When it is sour, as it will be, use a teaspoonful of salaratus, but do not put it into the yeast, but into the bread. If it becomes sour it is better to take fresh yeast to start with again, than to use some of the fresh yeast to start with again, than to use some of the same. L. E. R.

New Seedling Pie Plant.

EDITORS OF THE "COUNTRY GENTLEMAN"—We send you to-day, by express, a small package of Pie Plant. It is from a seedling of our own raising. Please give it a trial. We have tested it repeatedly along with the Linneus, Cahoon, and Victoria varieties, and we think it superior to either of them. It is less acid, and at the same time equal, if not superior, to the Linneus in flavor. It is fine grained, tender, and very free from the peculiar rhubarb taste. Its size is very large.

The stalks we send you are rather short, owing to being grown from quite small crowns, transplanted late last fall. They will, perhaps, give you some idea of the plant. Theodore L. Pitt. Oneida Community, Oneida, N. Y., Ang. 22.

plant. THEODOR

The package reached us safely, and the variety is certainly all that it is represented to be in the letter accompanying it, published above. The stalks are of good size and very solid, and the flavor excellent, closely resembling that of a good pie apple. We think it worthy of dissemination.

Patent Hives.

Farmers have probably been more generally disappointed in the purchase of patent hives than in any other arti. cle. In the purchase of patent machinery, or almost any thing, you can see it tested and judge of its merits before purchasing; but with hives, the purchase is mostly and or necessity made on faith, and the buyer generally has only a vague and mysterious idea that somehow (he cannot tell how exactly,) he will realize all he has been told by the patentee or his agent, and he invests and waits patiently a season or two for the fulfillment of those promises, and then almost invariably regrets his outlay.

I desire here to give a little advice, and a few words of caution to those who believe too readily what they heaf

I desire here to give a little advice, and a few words of caution to those who believe too readily what they heaf from patent venders.

First Before purchasing a patent, ascertain from reliable authority, the opinion of men of long experience, who keep a large stock of bees for profit, and whose honey may be seen for sale at almost every corner in our large cities; if they use, or if they recommend that patent disinterestedly, then you may venture, but with considerable caution, to give the hive a trial on a small scale.

Give no heed to the name, however pretentions and captivating, nor to the ills they insure against. Without remarking upon their merits, I will give a few of the titles: "Combination Hive," "Common Sense Combination," "Moth Destroyer," "Moth Preventative," "Non-Swarmer," "Artificial Swarmer," "Dividing," "Storifying," "Moisture Condensing Hive, &c. When we add to thiss "artificial feed," and "A Restorative Drink for Hot Weather," the comfort of the bee seems to be well provided for. The last discovery ought to find a good many advocates among those who like a little something warm, but who do not restrict themselves to "hot weather" in the use of the "restorative."

Secondly. Consider whether you can make the hive, or get it made at a reasonable price. Almost all patent hives are made of boards of several thicknesses, slides, glass, &c., which cannot be readily obtained in every neighborhood, then the dove-tailing, and many points of construction, can only be well done by a carpenter, and not profitably, without the aid of machinery. The question is, without the aid of machinery. The question is, without the aid of machinery. The question is, with the hive; so their "individual or farm, right," was of no advantage to them. Look well to simplicity of construction before purchasing.

All experienced bee-keepers will agree, that as good results have been obtained, in many instances, from the comb and colony.

The simplest means of doing this in all its details, is now occupying the attention of a



Turkey Breeding.

Few turkey-breeders are aware of the superior advantages of retaining old birds for breeding purposes. The most of our farmers dispose of their old turkeys, as they call them, every fall, which is in fact at least two years before they have reached their maturity, and just so long before they have arrived at the best age for breeding purposes. Audubon, the distinguished American Ornithologist says: "The third year, the male turkey may be said to be an adult, although it increases in weight and size for several years more. The females at the age of four, are in full beauty." The naturalist was then speaking of the wild turkey; but as all our families of domestic tur-

are in full beauty." The naturalist was then speaking of the wild turkey; but as all our families of domestic turkeys have descended from the American wild, not more than about three hundred years ago, and frequent crossings are known to have been made from that time down to the present, it is but reasonable to suppose that the law of growth, that governs the wild turkey also to a great extent, controls the domestic. Indeed, domestication has only changed the color of the plumage. No breeder of sheep would think of improving his flocks by disposing each year of all his old sheep and breeding only from lambs, yet he would be quite as wise as he who annually retains only young turkeys for breeding purposes, for the sheep certainly reaches its maturity as soon as the turkey.

Old hen turkeys do not lay as early in the season, nor as many eggs as young birds, but the young chicks are so much stronger, hatched from the eggs of the old bird, that with ordinary care, more young as well as better, will be raised in a season from the old hens.

Select the eurliest hatched, largest, and best formed turkeys for breeding purposes—securing a male not related to the females, if convenient. Keep the hens until seven or eight years old, or so long as they continue to lay well, and keep the males until three or four years old, and our word for it, the breeder will be satisfied with the result, for we have seen it tried.

Feed but moderately during the winter—more generously towards spring, and plentifully during the laying season, when good hens will lay from thirteen to twenty-five eggs the first litter. These may be hatched with advantage under large hens, especially any of the large Asiatic family. The turkey will soon commence her second litter of eggs, which in number will nearly equal the first. A young hen of ours, that weighed about fifteen pounds, has this senson layed over fifty good eggs. Let the turkey sit on her second litter of eggs, which she ought to bring off early in July.

When the young turkey chicks or poul

The Creameries of Orange County.

According to the writer of a series of articles in the N. Y. Tribune, on the "Orange Co. Milk Business," there are four dairy establishments in Orange Co. which send sweet cream to New-York city, instead of milk, and employ the skimmed milk in making cheese for exportation. From the source above we gather some facts in regard to the business.

The largest creamery is that of Foster Clark, whose farm comprises two hundred and ten acres, and who really keeps thirty cows in summer, and forty in winter.
They run to pasture in summer, and are wintered on bay, one-half of the amount given being cut and then moistened and mixed with corn and oats ground together. Mr.

C. has been in the cream business for four years, having previously sent milk to the city, and occasionally a mess of cream. Finding the latter more profitable, he has gradually worked into his present mode of disposing of the product of his cows, carrying it on with systematic neatness and good management.

Immediately after milking, "the milk is strained into coolers—the long tin pails 18 by 4 inches—for the cream to rise. The coolers are set in cold spring-water vats, constructed in the dairy house, where they remain for 12 or 24 hours, or until the animal heat is thoroughly expelled. The cream is skimmed off and put into ordinary milk cans, which, when sent to market, are set in wooden tubs, so large that four or five inches thickness of ice can be packed around the cream can. Kept cool in this way the cream reaches the city, even in the hottest months, perfectly sweet." Ten quarts of milk furnish one quart of cream, and Mr. C. sends forward three hundred to four hundred quarts daily, of his own production, besides, in the height of the ice-cream season, large quantities are purchased from neighboring dairymen.

The average product of milk per cow in Mr. Clark's dairy is ten quarts, yielding one quart of cream, a better result than is ordinarily obtained. At some other creameries, however, more cream is realized, either by closer skinming or from richer milk—one quart of gream to eight

result than is ordinarily obtained. At some other creameries, however, more cream is realized, either by closer skimming or from richer milk—one quart of cream to eight quarts of milk—and even to six quarts—being the fre-

quarts of milk—and even to six quarts—being the frequent proportion.

The skimmed milk, as remarked above, is made into cheese in the usual way, but the product is said to be mostly exported to the South, the less buttery character of the cheese fitting it better for keeping and use in a warm climate. These cheeses are made usually of about 35 pounds weight, and the average price obtained is seven cents per pound.

Manner of Milking.

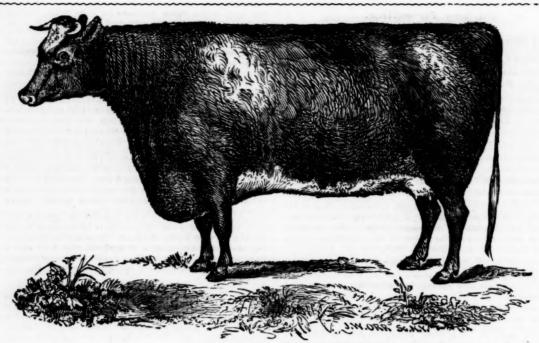
We have always believed that this part of farm work is performed in a careless and indifferent way, and it is also a fact that milking so done must produce very serious results upon the usefulness of the cow. The following remarks which we condense from a recent English agricultural journal, not only show this important fact, but point out the way in which it should be performed. Very often upon our farms this is left for the "hired man" to do, who has no interest to accomplish it in the right way; but if he must do it, give him ample time, and have it

who has no interest to accomplish it in the right way; but if he must do it, give him ample time, and have it done in a faithful manner, as here shown:

The manner of milking is a more powerful and lasting influence on the productiveness of the cow than most farmers are aware of. That a slow and careless milker soon dries up the best cows, every practical farmer and dairyman knows. The first requisite of a good milker is, of course, the utter cleanliness. Without this the milk is unendurable. The udder should, therefore, be carefully cleaned before the milking commences. The milker may begin gradually and gently, but should steadily increase the rapidity of the operation till the udder is emptied, using a pail large enough to hold all, without the necessity of changing. Cows are very sensitive, and the pail cannot be changed, nor can the milker stop or rise during the process of milking, without leading the cow more or less to withhold her milk. The utmost care should be taken to strip the last drop, and do it rapidly, and not in a slow and negligent manner, which is sure to have its effect on the yield of the cow. If any milk is left, it is re-absorbed into the system, or else becomes caked, and diminishes the tendency to secrete a full quantity afterwards. If gentle and mild treatment is observed and persevered in, the operation of milking appears to be one of pleasure to the animal, as it undoubtedly is; but if an opposite course is pursued—if, at every restless movement, caused, perhaps, by pressing a sore teat, the animal is harshly spoken to—she will be likely to learn to kick as a habit, and it will be difficult to overcome it afterwards. To induce quiet and readiness to give down the milk freely, it is better that the cow should be fed at milking time with cut food, or roots, placed within her easy reach. The same person should milk the same cow regularly, and not change from one to another, unless there is special reasons for it.

A Cure for Corns.

Have your shoemaker make your boots tight as you can bear on the lower part of the instep, to keep your foot from shoving forward—tack a piece of leather on the last where the corn comes, to raise it a little, and your corn will starve to death. Try it, ye cripples. It is a better remedy than chewing tobacco. S. M. REYNOLDS.



Short-Horn Cow "Bloom."

The property of Col. Wm H. SLINGERLAND, Norman's Kill, Albany Co., N. Y. Imported by Col. Morris. Red Roan, calved Jan, 1850—bred by Mr. Fowle, North Allerton, Eng. Sire Sir Leonard (10827)—dam Elwira by Aeolus (3733)—g d. Golden Pippin by Belvidere 2d (3126)—g. g. d. by Alive O—g. g. g. d. by Eclipse (236)—g g g d. by Charge's Gray Bull (872) g g. g. g. d. by the Paddock Bull (477) g. g. g. g. g. g. d. by Brown's Red Bull (97)

Bloom was the winner of the 1st prize at the New-York State Show in 1854, and is mother of Samuel Thorne's celebrated heifer "Gloster's Bloom."

Drainage Lengthens the Season.

One beneficial result claimed for thorough drainage is that "it lengthens the season for labor and vegetation "-an " extension " which the crops and the farmer needs as often as the customer of banks and brokers. That the time required for the "settling of the soil" after the winter frost passes from it, depends to a great extent upon its porous or its retentive character, is everywhere known and conceded. The deep gravelly loam is seen to be very soon free from water, while the heavy clay requires a long time to become fit for cultivation. In the one case the soil is fully drained-in the other the water mostly passes off by the slow process of evaporation. Thorough drainage of the heavy soil renders both alike in this respect, and thus adds from ten to fifteen days to time of preparation for seeding-giving the same increased time for the growth of the crops to which the land is devoted.

We have the testimony of various practical farmers on this question, and none more to the point than the following: At an agricultural meeting in Boston, Mr. B. F. Nourse, of Orington, Me., who was present, said that drainage on his farm "had put his springy, cold lands in good working condition earlier in the season than any other in the neighborhood. One lot drained in 1852 was in good working condition as soon as the frost was out. Before drainage, cattle could not cross it early in June without miring. It enabled the later as well as the earlier cultivation of the land. He had plowed as late as the 20th of November." Messrs. Maxwell Brothers, of Geneva, N. Y., in a statement of draining done on their farm in 1855, and which received the first premium of the State Ag. Society, say they un-

derdrained one clayey lot, which previously "it was quite impracticable to plow or cultivate in a wet time, and consequently it was very difficult to get in a spring erop in season." After underdraining "they could cultivate immediately after rains with advantage," and, of course, get in their crops much more sensonably than before. Mr. Yeomans, another Central New-York farmer and nurseryman, states that on his drained lands "the ground becomes almost as dry in two or three days after the frost comes out in spring, or after a heavy rain, as it would do in as many weeks before draining," and the frost leaves drained land at least a week sooner than that which remains undrained.

These instances are surely enough to satisfy those who have lost time, labor and crops from late sowing and planting, caused solely by waiting for "the sub-siding of the waters," that there is a remedy for this evil—a remedy not only effectual in removing this, but many other disadvantages under which they labor in

cultivating retentive or springy soils.

We have above stated that in addition to the lengthwe have above stated that in addition to the long in ening of the time of preparation for crops, it gave, by enabling earlier planting and sowing, increased time for vegetation. How important this is, facts in the experience of every farmer show. "Ten days, frequently," says the author of Farm Drainage, "may be the security of our corn crop against frost. In less than that time a whole field passes from the milky stage, when a slight frost would ruin it, to the glazed stage, when it is safe from cold." and this advanced maturity that time a whole field often decides the question of profit for the farmer, making from one-third to one-half difference in the value of his product of Indian corn. A few days more in the far better to withstand the summer drouth, and thus mature a larger and better product. These few days, and more, will be given by providing a ready exit for the surplus water from the soil. We may not only have full time for the proper preparation of the ground, but (in usual seasons) for the full maturing of our crops.



Foreign Editorial Correspondence.

The Highland Society's Show at Edenboro.

Extract from Letter XIII, giving an account of the annual Exhibition of the Highland and Agricultural Society of Scotland, at Edinboro:

A walk of not more than a mile carried us to the Grounds of the exhibition, to reach which we cross a meadow adorned with numerous milch kine and small children—the former out for exercise more than for the grazing, as they are well fed and stabled at night; the latter apparently in charge of various articles of apparel, from which the sun is evaporating the last drops of the laundress' suds. Numerous pedestrians are also strolling around, and if we go out on Thursday we shall find multitudes on foot or in carriage, seeking ingress to the Show, or departure from it. Then we pass the entrance gates, and are among the implements, while stretched across the whole field in twenty-five or thirty rows running back from the gates all those of one kind,—the plows, the thrashers or the harrows, for example—being classed together, an arrangement of which manufacturers complain as dividing up and separating their collections, although it seems well to answer the public convenience. It may interest the reader to know that there were about 60 plows, of different kinds, exhibited, including those for general purposes, for trenching or deep work, for subsoiling, etc. That there were over 30 Grubbers or Cultivators, with wheels and without, with prongs or shares or teeth, illustrative of the clean farming of Great Britain; and that three dozen Pulverizers and Clod Crushers, and nearly thirty Harrows for heavy lands, or light, or for covering seeds, represented the care with which a fine tilth is here so sedulously maintained. That over 40 machines were offered to put in the farmer's crops—to broadcast or drill his grain; to sow his grass lands, and to drop his turnip seed, either alone or simultaneously with some fertilizer; together with others specially intended for corn and for beans. So we might go through the whole list, which covers almost everything, from a liquid manure pump to a reaping machine, from a hay-rake to a thrashing-mill, from sheep hurdles to draining tools.

ing machine, from a hay-rake to a thrashing-mill, from sheep hurdles to draining tools.

Proceeding along the central passage way between, we are led past a fountain to the Committee Rooms of the Society, and thence through the Dairy shed on the left, containing no less than eighty samples of Butter, to number one on the cattle list. The first prize Short-Horn bull was sired by "2d Grand Duke," while his mother was sired by "Grand Duke;" the second prize was sired by "Captain Balco"—both names well known in our Short-Horn annals. Among the bulls of 1857 I liked the first prize animal, which was of the Duke of Richmond's breeding; in those of 1858-9 Messrs. Smith & Co., of Ardersier, were rated second for one of Booth extraction from the Prince Consort's herd. Among the cows, Mr. Douglass' "Venus de Medicis" swept the prize deservedly; she is a fine example of the breed, if not one of the most perfect ever bred, and was sired by "Harbinger." The same gentleman took 1st and 2d prizes in the heifers of 1857, with The Lady and The Maid of Athelstane, the former of which I heard rated as "the best animal on the ground," but this gentleman was not so successful in the heifer calves, which as a class I think would scarcely rank as extraordinarily good. As a whole, this part of the exhibition would compare favorably, perhaps, with that I hope to see next October in Albany, but it strikes me that we have some animals fully capable of creditable competition in any

of the classes on the field this week.

It is general with us to consider the Polled Black Scotch cattle as all of one sort, but two breeds are recognised here—the Galloway, with coarser bone and longer hair, and the Augus or Aberdeen, which possesses many of the characteristics of the Short-Horn, weighing well at an early age, often very nice in quality, and made up symmetrically to the eye as well as profitably for the butcher. The two breeds appear like

the same thing—with the difference that might arise by one's having been suffered to go for many generations without much shelter, and exposed to a far less favorable climate, while the other has been carefully bred and protected, nurtured on rich pasturage, and never suffered to lack for food or warmth. Some of the specimens of it on the ground—perhaps the first prize yearling heifer furnishes the best example—if transmuted t a roan and adorned with horns, would have been nearly all that the lover of the Short-Horn could wish. I had no idea that so much had been accomplished toward the perfection of the breed, and I was given to understand that there is certainly not more than a few months difference in the time the Augus and the Short-Horn are respectively ready for slaughter. Mr. Bowie of Arbroath, who has stood at the head of breeders in this class for some time back, told me of having killed a bull at 4 years and 4 months old, which weighed for the four quarters and the fat, 2,100 pounds; he only exhibited this year a single bull, a two year old, which came out second in his class, although the one to which the judges gave precedence has been criticised since the decision as unworthy of it, both privately and in one or more of the newspaper reports.

more of the newspaper reports.

The Galloways are undoubtedly hardier than their more high bred brethren; we have had at some of our exhibitions quite fair specimens of the breed, brought over by Canadian gentlemen. They make good beef, but must be a little longer in the operation; they have been found to make a good cross for feeding purposes with the Short-Horn, giving the progeny the power of "roughing it" a little better, perhaps, in exchange for the earlier maturity and disposition to take on flesh

which it gets from the other side.

Still more shaggy and curly haired than the Galloway, coming from a bleaker and ruggeder district, less in stature and long in horn, generally I think a kind of dark brown in color—come the West Highlanders—productive of good beef, which is their main object, but also often quite large milkers, I was told. It is said that this breed was falling out of notice, but the present show should have the effect of calling attention to its merits for such localities as cannot well support the more tender and dainty races.

Of the Ayrshire cattle, some of the bulls were really good animals—as for instance the first prize in the aged class, which had received similar honors at the Glasgow shows, and one or two others in the younger classes. The first prize cow was also the one which held the same place at Glasgow this year, and was considered at both shows "a singularly fine first class specimen of the breed." The Ayrshires are so widely known with us, that it is quite superfluous to refer to their milk giving propensities, but from what I have been able to learn, I infer that they are coming more into request now than heretofore, and that more attention than ever is given to rendering them good for dairy purposes.

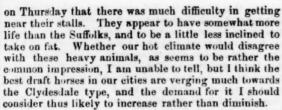
As to sheep, I may refer to a difference which has

As to sheep, I may refer to a difference which has been already noted I think in my letters, between the Leicesters shown by different breeders, especially as regards size—a difference which brings the judicial decisions of the show grounds into conflict with the opinions of those whose preferences chance run in another channel. It extends to the character of the wool as well as to the make of the animal, and as it is unknown which the judges at any show may look upon as the type best to be retained, the breeder who wishes to be a prize taker, is at loss to determine whether to introduce more of the English southerly blood, or to stick to the borderbred sheep, which has perhaps a tinge of other blood at bottom, although unacknowledged. The Black-faced sheep, whose heads are singularly mottled of jet black mingled with white, are a quite important breed, and make excellent mutton; next to the Cheviots, they are the most commonly seen through the country.

There was much to attract attention in the long range of Clydesdale horse stalls—so much, indeed, that, not having examined them when the grounds were less densely filled on Wednesday, I found the crowd so great







On Tuesday there was a trial in thrashing, five machines being tested with wheat, and the work accom-plished by the largest of them was "extraordinary," says an unofficial but highly accomplished reporter— "about 50 or 60 bushels of wheat an hour being finished for market – the separation of straw, chaff, &c., being made in the neatest possible manner." To do this To do this probably requires a six or eight horse power engine.

In the afternoon of the same day there was a trial on grass land, when Allen's mowing machine, made by Burgess & Key, cut well. Hay rakes were also tested, and a part of the field plowed for the purpose, afforded room for experiments with the harrows, pulverizers, grubbers, &c., entered for competition. In the evening grubbers, &c., entered for competition. In the evening Dr. Anderson, chemist to the Society, delivered a Lecture on the Feeding of Stock as a branch of Farm Management. I should like to have heard it, had I known that it was to be given, for I have since been told that it was eminently practical, sound and reasonable.

As one of the incidents of the week, which should not be lost to republican readers, the faithful chronicler could not overlook the duty of mentioning that the future sovereign (should Providence so order it) of that Great Empire which has so long embraced the world with its territories, ships and manufactures-twice "honored" the Show ground with a visit on horseback. The Prince of Wales is a slight "laddie," with a pleasant expression, and quiet, gentlemanly demeanor. I observed that in lifting his hat to respond to the salutations of those around him, that useful article of shelter was elevated very perpendicularly, and I did not observe that either the head thus uncovered, or the neck beneath it, condescended to the slightest possible forward or down-ward inclination. It was not ungracefully done, how-ever, and I suppose it contrary to etiquette that the royal bow, although a matter of politeness as an acknowldgment, should become in the most remote degree the symbol of an obeisance. The young gentleman has been pursuing his studies at Holyrood Castle for some time back; he is said to resemble his mother very much, which I can easily believe, although I have not seen her, from the fact that his profile is almost the precise counterpart of the QUEEN's, as officially portrayed and impressed upon that most burdensome coin of coin of the realm, the copper penny. He was received by the people with considerable enthusiasm, occasionally an instance of which was a little amusing—one motherly old lady who pressed forward to get a good view, whom I happened to be near, and whose voice was inversely in proportion, as regarded volume, to her matronly per-son,—ceased not to cry a shrill "Hooray," as long as he was in sight, no matter whether there was any other acclamations or not. I moreover overheard more than one of the numerous younger ladies on the ground stoutly declaring that she, individually and particularly, was to whom the royal hat was raised in passing that part of the ground. All this, however, is very pardonable, it a weakness it shows, and I hear everywhere expressions of affectionate loyalty and respect toward Her Majesty, whose success in uniting the hearts of her people in support of her throne and family, certainly goes either to prove herself a clever and sensible as well as a good woman, or else to show that what we may call the "bump" of reverence for lack of a better term, is

The Banquet or dinner of the Society took place
Wednesday evening. The Duke of Atholl presided,
dressed in his Highland costume complete, with the star

of the Thistle on his breast. There were also present the Dukes of Richmond and Buceleuch, and many others of high rank in life, or whose assistance the Society had received as Judges, or who came merely as lookers on and partakers,—so that altogether perhaps more than two hundred were present. I was quite interested in the proceedings and the speeches, and the whole seemed a very good method of promoting good feeling and mutual courtesy. It would not be of interest so far away to go through with the toasts that were drank, away to go through with the toasts that were drank, and the responses that were made. The Duke of Richmond, in answering on behalf of the "Successful Competitors," gave quite a sketch of his own ill-success for sometime, and of his perseverance until he had lately quite reversed the fortune of other days. He had previously responded for "The Army," when he alluded to the fact that 49 years ago he was a soldier with Wellington in the Peninsula. On both occasions he was relington in the Peninsula. On both occasions ne was received with much enthusiasm by the audience, but no more than was also shown for his grace, the presiding officer, or the Duke of Buccleuch, the last of whom appears especially to be quite a hard worker in the affairs of the Society.

The managers of the evening had done me the honor to call for an American response to the last toast but one upon the list—"the Strangers." The fact that the Highland and Agricultural Society is now just 75 years old, and the parent, I believe, of similar associations both in Great Britain and abroad, gave me the opportunity of offering the congratulations of our own Society upon the long and useful career her Scotch prototype has enjoyed, as well as of expressing the hope that the example thus placed before the agriculturists of other lands might be well and wisely imitated.

There is much more that I should like to say both in relation to this and the other exhibitions I have attented, now that they are all concluded. I shall endeavor, when opportunity offers, to give some notices of particular implements, and a little fuller description of some of the breeds of domestic animals.

Extracts from Letter XIV:

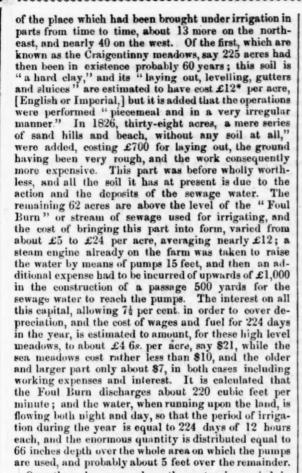
The Irrigated Meadows near Edinburgh.

After the Highland Society's Show of which I last vrote, I had the pleasure of visiting ROBERT RUSSELL, aso., whose tour four or five years since in the United States, resulted in a most interesting narrative embracing particularly our agricultural and climatic peculiar-ities, and who at home is both an industrious author and a careful thinker upon these subjects, as well as a close observer of nature. He was kind enough to point out to me some of the famous Edinboro meadows, which rent all the way from £10 or £15 per acre for those nearest the sea, up to double these prices for others preferable in condition and locality. I was always at a loss to understand how any grass crops could be worth a hundred dollars or more per acre for each year's yield, until I learned that the Edinboro milkmen still the singular impression so utterly obsolete with their New-York brethren, that the cow does require a portion of green sustenance in addition to the distillery slops or other food she receives, and that they pay enough attention to the healthy quality of her milk, and to rendering her own life a decent and comfortable one, to supply her with what her natural tastes and even her very existence for any length of time, seem so positively to necessitate.

The "rent," then, of the Edinboro meadows is the rice at which the crop of grass for the ensuing season is bid off at auction at its commencement in the spring —the bidder cutting for himself from time to time as the grass is wanted for use, and feeding it green to the cows, which are either confined, or allowed during the day-time to range for exercise on some of the higher non-irrigated lands near the city. From a report published several years since, for a copy of which I am indebted to Mr. Russell, I find that up to the date of its issue, 1852, there were about 325 acres to the southeast







Over these lower meadows the water is carried in channels following the inequalities of the ground, or in some cases the land is laid off in "panes" of half a Scotch acre each, a "feeder" bringing the water to each "pane" or plot, and the latter plan, although at each "pane" or plot, and the latter plan, although at first more costly, is said to have been found preferable in practice. But I think that on a part of the irrigated meadows we saw, the distribution was effected by means of pipes and hydrants with hose attached-a method more economical of the water, where economy in this

respect is important.

It was estimated that the eight months of grass-cutting will keep ten cows per Scotch acre, (equal to eight cows per English acre,) and this fact will enable the farmer or dairyman, with us, to determine the price he could afford to pay for the crop cut during the period in The cows are stated to receive, beside the question. grass, distilling refuse, costing from twenty-five to thirty cents each per week. The fertility produced is entirely extrinsic, it is remarked; that is, both the heavy clay and the farms sea-ward would be entirely or almost sterile without the application, while with it, the older the meadow the better it apparently becomes. Four, or sometimes five, times is the field mown, and it is, I believe, irrigated after each mowing, and several times during the winter season—14 days (and nights) being sufficient to go once over the 325 Craigentinney It requires two hands to turn the water off and on, and this is the only expense on the low-levels to the owner of the land, except keeping the channels clear; the refuse taken out to effect the latter object, is valued as a manure, for enough to pay the expense of its removal. Occasionally turnips and potatoes are grown upon these lands, although italian rye grass is the main crop. Mr. Bryce, the resident manager, at the time of the report referred to, thought the sewage refuse to

exert a more permanent effect upon crops than guano. He had then a crop of turnips growing, which had received about 19 loads to the acre, together with 12 or 13 of farm-yard litter, and the land had had a dressing of the liquid before they were sown. This crop was "very fine," and was expected to realize £20 per acre; the land received he good for a fine group of harders the the land would be good for a fine crop of barley the next year, and was then to be put down in grass, both without further solid manure, which Mr. B. would not have attempted had guano been applied in lieu of the

The facts I have given will be enough, perhaps, to The facts I have given will be enough, perhaps, to throw some light upon the subject of these highly-rented meadows, for those unacquainted with its details. I could have wished, however, had time and circumstances permitted, to have investigated the matter a little more carefully as it stands at present. The average rent of the Craigentinney meadows, was over £16 per English acre at the time of the report, and unless I am mistaken, has somewhat increased since; some of the best nearly doubling this figure. But the question of irrigation is one that will require a further letter, and I shall hope then to recur once more to the modes here practiced, and the results attained. here practiced, and the results attained.

Fenton Barns and Halton.

My next visit was at Fenton Barns, the farm of GEO. My next visit was at Fenton Barns, the farm of Geo. Hope, Esq., in East Lothian, who is justly esteemed a prominently successful farmer, in a district where agriculture is in a very advanced state, and whose system of operations deserves a more detailed and careful account than time will now allow. But there is too much that is interesting in the locality to pass it by without a word. In promising hereafter as full a description as possible of Mr. H.'s ways of management, I need scarcely add that they are eminently of that kind which puts money into the pocket instead of taking it out, and this I suppose to be the real gist of all farm economy. This region is not one in which the four course or Norfolk rotation is strictly followed, although its theory furnishes the general outline of operation, so its theory furnishes the general outline of operation, so to speak. I had before seen examples of its unvaried employment; here I came to where it meets with numerous modifications, and I have since visited dairy

districts in which it is scarcely recognized at all.

A pleasant walk inland from Largo station, it is to Halton,* the residence of Mr. Russell, senior, at whose farm I found that modern innovation, the reaping machine, in preparation for action—a new specimen of Burgess & Key's McCormick being just on the launch Burgess & Key's McCormick being just on the hunch for its trial trip in the ripe "corn." * * * The farm at Halton is about 370 acres in extent, and I understood that it was customary to keep three or four hundred sheep through the winter, and from two to three hun-dred in summer, while about fifty cattle are also fed. The general rotation upon the heavier lands, is one of six years—for example, 1, wheat; 2, clover; 3, oats; 4, beans; 5, wheat again, and 6, either a fallow or a turnip crop, before beginning the same round a second time. On the lighter lands this course might be extended to seven years by keeping the clover or grass for two successive crops.

Flax Dressing Mill.

We had a fine drive in the afternoon. One hears from open doors and windows, in the villages through which it carried us, the sound of the weaver's shuttle, for in this and some other parts of Scotland, the hand-loom is not altogether a thing of the past. We visited loom is not altogether a thing of the past. We visited an establishment for the preparation of the flax in the straw, so that it can be converted into yarn and linen by the village, or other and larger manufacturers. the former case, the fabric produced is bought up by houses extensively engaged in the trade, and sold in

^{*}It was in a defile which the road here skirts that I saw that sight common enough in many parts of our own country, but sufficiently rare here to be perhaps worthy of remark—a saw mill at work with water power. Both the timber to saw and the descent to give power are very "scarce articles," generally through Great Britain.

^{*}A pound sterling (£) may be computed at \$5, which near enough to convey an idea of the sums expressed in this paragragh.

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quantities for export or home consumption. I was told that the expense of manufacturing is not very widely different, as between the power loom and the hand—the former, however, having the great advantage of being able to work up much larger quantities in a given time, and admitting of better command over markets, so that it is by degrees superseding the ways of the fathers. At the mill we visited, which is carried on by a son of my host, they were making an extension of buildings and machinery, so that only a part of the works were going forward. They buy the flax, as I have intimated, in the straw, from those who raise it, and it is necessary to steep enough during the season favorable for this operation, to last for the winter's work, when the weather is too wet to dry the rotted stems. There are twelve or fifteen pits of different widths, 6 feet deep and 22 feet long, in which the steeping process is carried on. After it is completed, to accomplish which considerable experience and good judgment are requisite, in regard to the time occupied—the stems are passed between very heavy iron rollers, with jets of water playing on them, after which washing and squeezing, they are spread upon the ground, to be subjected to the evaporation of the open atmosphere for a period averaging, perhaps, 12 or 15 days, but varying much in different cases. The straw is then in a state to be stacked for use as required. A breaking machine, consisting of fluted rollers running together like the teeth in cog wheels, next loosens and separates the fibre, and detaches a part of the extraneous material still remaining. The hatchelling succeeds, handfulls of the flax, as it comes from the breaker, being held against a smooth wooden upright, and the long arms or beaters projecting from a revolving shaft, strike it one after another, clearing away the tow and further reducing the fibre. The price paid for the straw runs from £2 per ton upwards, and is sometimes as high as £5 for the best, although £4 is more usual

Mr. Lawson's Steading and Farm.

The stop I made first was at King's Kettle station, and a few moments' walk carried me to the finely situated residence of Mr. Lawson, who is scarcely a fair example of economical practice I am afraid, for I learn that he conducts his 240 acre farm rather with a view to recreation than for any purpose of pecuniary profit. Among the complete and substantial, the convenient and labor-saving steadings I have seen, none can I call superior to the buildings upon this estate. The particulars in their construction, of arrangement and dimension, my visit was too hurried to allow of obtaining, but they will be worth the publication most amply if I am favored with them hereafter.

Like most other farmsteads of the present day in Scotland, the one under consideration is built of solid masonry, and everything, I believe, within and without, is of stone. The divisions between the stalls are large thick slabs, and each has its water trough with supply from a faucet of its own, while the arrangements for feeding are so calculated as to save labor wherever possible. Beyond the engine of six-horse power, and the thrashing apparatus are close at hand, and the liquids from the stalls are of course duly carried away into a proper receptacle, which is no less than 70 feet long, 12 wide and ten or eleven in depth, all of stone, with a gage rod and index showing the quantity the tank contains. A pump worked by the engine is affixed, and the lowering of the water surface within of course indicates the quantity drawn out for the irrigation of several adjoining fields. Five pair of horses are employed to work the farm, and the buildings accommodate 60 head of cattle. Mr. L. uses the following succession of crops as a general rule: 1, grass; 2, oats; 3, turnips; 4, wheat; 5, barley, and 6, grass again on the lighter lands, when it is mowed one year and pastured the next, but on the heavier soils the course is only a 5 year one. The rent in this part of the country is about fifty shillings per acre, (say \$12) Last year, as in other localities, the grain crops were very fine, some of the wheat and bar-

ley here yielding 56 bushels per acre. Mr. L. had travelled in the United States, and in speaking of the heavy Clydesdale horses, of which all this part of Scotland affords many good examples, he expressed the opinion that they were not so well fitted for the greater heat of our climate as some of our lighter breeds, although a cross might not unlikely have a beneficial effect. He commented upon our neglect of manures, and I told him that I hoped every day was bringing some improvement in this respect. In his rotation the green crops all receive some application, and indeed the barley also, for the grass is sown with it.

More of Fifeshire Parming --- "Park Hill."

The farm that bears this name embraces five or six hundred acres of land running nearly two miles along the water's edge, and back from it a little way upon the adjacent hill-sides. A seven year rotation is common here, consisting of, 1, wheat; 2, barley, the ground receiving a dressing of farm-yard manure; 3, grass, the seeds having been sown among the barley; 4, oats; 5, potatoes or beans, for which crops manure is again applied; 6 wheat, often manured, and, lastly turnips, which of course are treated with fertilizers. Some of the heavy lands, which are a stiff clay, have been quite effectually drained, I was told, by digging first a simple ditch to a depth of eighteen inches; then with a spade perhaps two inches wide at its lowest end and not much more at top, a spit is taken out from the bottom of the ditch cleanly and carefully, as this is to form the channel for the water. The original ditch being broader than this channel, shoulders of earth are left on both sides of it, and they receive and support a covering of flat stones, on which, after a layer of straw or similar material to aid in keeping out the wash, the earth is again filled in. Here, as elsewhere in Scotland, the grain is sown more commonly broadeast than is the case in England, and experience has shown, it is stated, that the "benefits of drilling are more marked in poor soils than in rich, on light than heavy land, in dry climates than in moist." Where the surface is less hilly, moreover, machines can of course work to better advantage.

Both in Europe and Great Britain, the women and children do a far larger share of the agricultural work than one is quite prepared to expect, although he may often have heard the fact alluded to. Many operations are performed by the job, one man taking it at such a rate of payment, and occupying his own family if he has one, or engaging otherwise a sufficient force of females, or of boys and girls, as the case may require, to enable him to complete it most economically. For example, here the reaping is done for twelve shillings sterling per acre, (say \$3) paid to the man who binds the sheaves, and who has five women under his superintendence who do the cutting with sickles or hooks as they are more generally termed. Ordinary labor costs about twelve shillings a week, and perhaps £18 or £20 per year for hired men receiving their subsistence wholly or partly.

Fifeshire contained in 1856, nearly two thousand "occupant" farmers, whose arable land averaged to each 114 acres, showing a larger extent of land individually farmed, than is the case in the rest of Scotland—the average for the whole country being a fraction less than 83 acres to a holding, of land under rotation. In Fife, too, a larger proportion is in white crops, being 46 per cent, or nearly one half, which is seven or eight per ct. more than the proportion the country through. Of this 46 per cent, about a third is wheat, a fifth barley, and two-fifths oats—which latter is a favorite grain as the world is well aware, wherever the Scotchman breakfasts on "porridge" or sups on "cakes." Of the other 54 per cent of arable land, there was more than half in grass, about one-fourth in turnips, one-seventh in potatoes, while mangolds, beans and peas, cabbages, &c., are all cultivated in quite a small way, and on less than one acre in a hundred was the old practice of summer fallowing still adhered to. The average production, ac-



1859.

cording to the statictics of 1856, was about 27 bushels wheat, 33 barley, 37 oats, 30 of beans or peas, 13 tons turnips, and nearly 2½ tons potatoes. But the crops are stated to have "suffered from exposure" that year in some parts of the country quite seriously. To work the land, about four horses to a hundred acres are employed.

Extracts from Letter XV:

System of Commutation.

It is the British theory of ownership in land, that all proprietors hold of the Crown, and that as tenants they should pay a formal rent as a mark of fealty or homage In some cases exemption has been acquired by a single exploit or payment, or otherwise obtained, but the old law is still, in many cases, enforced, subjecting an estate to a certain contribution in kind, or the owner of it to certain personal service. The author of "Waverly" good humoredly satirizes, in that novel, the latter mode of expressing one's sense of loyal dependence. To the former—the payment of a small tax in kind, or rather to the Scottish way, by which an equivalent of that tax is determined in money, we owe very interesting statistics as to the prices of grain, for a period embracing, I think, about two hundred years. Perhaps a third of the farmers in a parish, are summoned by the authori-ties during the last week in February or the first three weeks in March, to send in a sworn schedule of the wheat, barley and oats they have sold since the last harvest, with the prices received for the same. The average of all the prices is taken, and constitutes the standard by which payments to the government are that year com-muted from grain into money.

Use of the Word "Corn."

And speaking of grain, reminds me that if I had a Dictionary in my travelling library, as unfortunately I have not, I would endeavor to ascertain the origin and etymology of the word corn; for I have remarked this peculiarity in its use, that although signifying and the period of the second way to express grain of employed here in a general way to express grain of any kind, still it seems to appropriate itself, in each loca-lity, peculiarly to that kind of grain which is there most common or most important. For example, with us common or most important. For example, with us "corn" signifies maize, and has come to have this signification exclusively; but in England if a farmer says that his next crop in such a field is to be "corn," you may take it for granted that he means wheat, while if a Scotchman chances to make the same remark, you will understand, as a matter of course, that he refers to oats. In some parts of England, too, the word "beast," which we apply to one kind of domestic animal, almost as much as to any other, is limited to the bovine race, and our term "cattle," is extended in its signification to cover both horses and neat-stock, as well as sheep and swine

Excursion to the Highlands.

Such comparisons as to the use of language or any other subject of thought, may occupy the mind while we are carried over the rails from Stirling to Callender, for we shall only have an unsatisfactory glimpse, in passing, of the Bridge of Allan, the Cathedral of Dumblane, "the banner'd towers of Doune," the waters of Ardoch and Teith, Lanrick Castle and Cambusmere. But at Cal-lender we relapse a while into the times thirty years or more gone-by, for we take a coach-top seat for two hours of fine air and noble scenery.

But of this drive and journey after it, I am not going to attempt a description. It is the country of the "Lady of the Lake!" Collantogle Ford is still where it was of the Lake?" Collantogle Ford is still where it was when Roderick Dhu acted as the guide across it of the "stranger" whose friend he had been when in need of hospitality, and whose foe he was as soon as the duties of hospitality were fulfilled. Ben Ledi and Loch Venachar, Ben Venue and Loch Achray, Lanrick Mead, where the ranks of Clan Alpine mustered, Duncraggan and the "Brigg of Turk"—these names and scenes, and others like them, fill one with such sensations as he might experience if he should actually awake in some region of myth or fable. It is entering the cave of Aladdin, and handling its precious stones with one's own fingers, and smelling the fragrance of its perennial blooms with the real and natural nose that smells the odor of ordinary flowers.

And so we come to the Trosachs, a bristling and rugged pass,

"So wondrous wild the whole might seem The scenery of a fairy dream."

And at its entrance Beal an Duine, where died the "gallant grey," Fitz James was riding—a misfortune that led him where we are going—to Loch Katrine and Ellen's Isle. Ben An and Ben Lomond tower above us here, and we long for a day or two to spend in exploring localities so enchanting, in rowing over a surface so transparent and so smooth, in waking the echoes that once rang with the slogan, and thrilled with the pibroch of Clan Alpine's chieftains. Time is inexorable, however, and our little steamer hurries us on; and the blue smoke curls away from her chimney, and carries our thoughts with it, eddying along lake and mountain steeps to the haunts of the old masters of the hills, who fancied that, like their native home, they too were

" Moor'd in the rifted rock. Proof to the tempest's shock."

Hunger gives a practical side to every subject, too and in these Highland realms exercise is invigorating to the powers of both mind and digestion. It is at an inn bearing that resonant combination of consonants to which it is so difficult to give the true sound for any but a voice versed in Gaelic mysteries—the Stronachlacher Hotel, that the traveller has an opportunity of carrying out two designs which will for some time have been turing in his bosom-to obtain a luncheon and to gather a handful of heather blooms. Not only the common heather will he find, but also two or three kinds of heath, and if he is a true Scotchman at heart or in birth, he will be wearing a cap or "bonnet" into which can be fastened a becoming plume of their sprigs and spikelets and purple bells.

It is a five miles drive to Inversnaid on Loch Lomond,

and then not quite two hours by steamboat carry us through a series of views probably unsurpassed of their kind, reminding one a little, where the islands are most numerous, of some parts of the St. Lawrence, but generally with bolder and higher banks. Toward the southern extremity the hills slope more gently away; the scenery becomes softer and the verdure more abundant, and many a sheep farm there nurtures a flock profitable in fleece and flesh. The sheep-walks are commonly rented not by acreage but according to the number they will graze, and here on these pastures the shepherd's occupation is not yet gone; with the intelligent assistance of his dog, his watchful care is still daily and nightly exerted over his charge, quite in the old pastoral way.

In association as well as from their natural beauty, the Scotch lakes seemed to me almost like a region of enchantment. They appear to have a character of their own, distinct from that of any other scenery; they retain in a great degree the primitive wildness of other generations: the mead that carpeted the gatherings of the clans, now yields, it is true, a crop of scanty grass, but no one has yet desecrated it with a modern dwelling; the cliffs and haunts of Roderick Dhu and Rob Roy mg; the clins and haunts of Roderick Dhu and Rob Roy have not been dug away for railroads, or absorbed into tillage; the pedestrian may now trace the sequestered pathways troiden by the messengers of border war, the bearers of the "Fiery Cross"—the boatman dip his oar where the Lady of the Lake rowed and sang, and where the pure waters and the pictures que heights around once echoed to the triumphal shouts and bagnine of the McGregor. The hetels for the accumumdapipe of the McGregor. The hotels for the accommoda-tion of the tourist in the Trosachs are castle-like structures of solid stone, and the steamers are so quiet and undemonstrative that one forgets their incongruity in their convenience, especially if he be a hasty Ameri-



THE CULTIVATOR.



can. On the coach and steamer I had the pleasure of meeting a very intelligent gentleman, perfectly conversant both with the language and the romance of the locality, and from him I learnt many particulars not mentioned in the guide books.

The most remarkable object seen in passing by Railway from Balloch, at the foot of Loch Lomond, to Glasgow, is the singular rock at the junction of the river Leven with the Clyde, on which is posted, five hundred feet above the sea, the castle of Dumbarton. This rock is only about a mile in circumference, and one can with difficulty account for its abrupt precipitous rise in the midst of the flat valley at its base, entirely isolated, and at a considerable distance from any hills.

Kent Cattle Show.

The reader will by this time have become so accustomed to abrupt transitions in these letters, which at present outline a journey whose details are to follow subsequently—that I shall not apologize for omitting now the record of some time pleasantly and profitably spent upon the estate of the Laird of Airdrie House, who prefers a Kentucky home to a noble mansion here replete with every luxury of aristocratic life; of a most interesting visit to the famous Iron works of that mining locality, as well as to one or two of its farms, and the Grand Palace of the Duke of Hamilton, beyond the Bridge of Bothwell; of a tour in Ayrshire, another at the English lakes, a day with the noted Dairy farmer Mr. Horsfall, together with something of the Western counties of England, of Staffordshire, and finally of Kent, and this last brings me to the point I am desiring to reach, the Show of the farmers of that region at Ashford, on Wednesday last, which it will only be of interest to notice while the event is still fresh in the recollection.

A score of horses were competing, mostly, I should judge, of Suffolk extraction, and including a few fair specimens of the English idea as regards the "Agricultural" breed. The first prize went to a sleek, bright bay, called "Young England's Glory," standing sixteen and a half hands on his shoes, with legs not too long, and such muscular development above them as they like here to have their workers carry. For a horse with such a weight has only to use the leverage of his limbs by leaning a bit away from his load, when bone and muscle and flesh seem to aid one another, as it were mechanically, in effecting "a long pull, a strong pull, and a pull altogether."

and a pull altogether."

There were two kinds of cattle shown, Short Horns and the Sussex breeds, (not to mention two or three samples of the Alderney.) The Short Horns were out in remarkably good force, I understood, for this locality; nearly fifty head were exhibited, young and old, and among them were such bulls as that of Mr. Noakes, bred by Prince Albert, and such females as Lady Pigott's "Lady Sarah" and "Duchess of Gloucester." I have yet, in fact, to hear of a county show in Great Britain, where there will not be seen some touch of the Short Horn blood, and it is illustrative of its popularity to find it classed first and alone on the catalogues I have seen, while "all other breeds" are often lumped together in a second class, constituted generally of the breed indigenous to the district, mostly or entirely. It is the only kind of animal, as far as I know, which has this common reception in the show-yards of the three kingdoms, and in the farm-yards of so diverse

As to the Sussex, they struck me as bearing a relationship to the Devons, which for the sake of illustration I may compare to the relative characteristics of the two Scotch breeds I noticed in a former letter—the Galloways and the Aberdeens. The first-named in each couple are not nearly so fine, symmetrical and highly bred, while at the same time there are marked similarities of color and general appearance. The Sussex are thought hardier than the Devon, and when I say that looking at the head and neck of one of the cows, I took her certainly for a bull, it will be understood that they

localities.

are quite lacking in that beauty and delicacy for which the Devon is so remarkable. But they are as invariably red; they are said to make equally good working oxen, to be fair milkers and to be convertible in the end into by no means a despicable quality of beef. They were repsesented on the grounds to the number of about seventy head, and as compared with previous shows, I was informed that in merits as well as numbers, the exhibition was regarded "good"—the males, either better in breeding than the females, or else whatever coarseness there is in the breed, comes out most strongly in the old cows.

Among the Long-Wooled Sheep, the "Pure-bred Kents" are first of course; they were out to the number of nearly 40 pens, and there were also a few Cotswolds. Seventeen pens of Downs, not altogether very remarkable, completed the sheep list; there were also some fleeces exhibited in competition, the Longwools varying in weight from as low 7 lbs. 4 oz., to one of 10 lbs. 12 oz., which took the first prize, and one a little heavier, (11 lbs. 2 oz.) which took the 2d—and the Down fleeces running from 5 lbs. 14 oz., to one of 9 lbs. 3 oz. There were but few Pigs in the yard. The show of Poultry was quite extensive.

There was quite a turn-out of Implements, mostly from the manufacturers of the vicinage. Fowler's Steam Plow was at work, and seemed to attract more attention than usual, for this field had about as many visitors as the general exhibition,—and, the same charge being made for admission to it, the result was quite favorable in a financial point of view. The plowing was excellently done as all admitted, the furrow 8 or 10 inches deep and otherwise very satisfactory. Burgess & Key's McCormick's Reaper and their Allen's Mower, were also tried to the great interest of many spectators, and doubtless as satisfactorily as could be expected, but the farmers here are very critical in their harvesting operations, and take reapers as well as steam-plows a little slowly.

And now I should come to the dinner, which ended the day, and which, under the able chairmanship of Lord Sondes—who has estates here as well as the one I have already mentioned in Norfolk—"went off," on the whole, perhaps more spiritedly than any at which I had before been present. The speakers were good, and might be pardoned here, so near their European neighbors, for saying a little more of "invasion" and "rumors of war" than their inland brethren—a subject on which a gentleman who adventured some peace sentiments, found a very unanimous sentiment prevailing, to the effect that it is only "a strong man armed, who keeps his palace and his goods in safety."

Altogether there were about twenty-five toasts or responses, and at the end the audience did not seem wearied—a fact which speaks more for the life and spirit by which they were generally pervaded than any other. The company numbered over 350, if I was rightly informed, and the places were all taken some while in advance. A late comer myself, and missing my friends until the repast was half concluded, I was quite startled when his Lordship who presided, suddenly proposed an American health—going entirely beyond the previously arranged and printed programme of the occasion to do so—for which very kind attention very gracefully offered, it is no more than proper that this acknowledgment should be made,—bearing additional witness, as it does, to the cordiality and courtesy now so uniformly manifested toward us, on this side the Atlantic, and quite reciprocated I trust by ourselves on the other. It is an incident to which I should not think it otherwise allowable for me to allude, but it seems to me indeed that they have much mistaken their province who write of other peoples and lands, and who in doing so take every opportunity for criticism and fault-finding, and little or none to contribute their mite in the promotion of mutual charity and respect. Faultless in manner, in grammar, in habits of mind and heart and life, are we none; it is wonderful how much mankind



will be found alike in all the wide realms of civilization; how the same petty grievances might be made the subject of similar complaint throughout, and how, too, all these dwindle into insignificance, by the side of what is good and generous and true in the common impulses of the heart.

This however, is a matter foreign to my purpose now, for I hope at some time to illustrate it more at length. Let me conclude by saying that the next day or two after the show, were passed under the kind superintendence of FREDERICK NEAME, Esq., in seeing something of the hop-gardens and general agriculture of Kent. L. H. T. London, August 27.

Inquiries and Answers.

Cultivating Drained Swamp.—I have a piece of land upon which there is a muck swamp of about twenty acres, which I propose to drain, and plant with corn next spring. The muck is from two to eight feet deep, and of a superior quality. How shall I prepare this soil for the seed? Had I better plow it this fall? What is the best crop to put on in order to get the most profit? And how must the soil be treated to ensure the desired result? E. J. H. Peekskill [The great point is to secure perfect drainage—then to clear off all rubbish that may impede the plow. It will be best to plow it in autumn, and have it exposed to the action of freezing. The application of some ashes or lime, and perhaps a small portion of stable manure, will probably be useful. Corn, timothy grass, and broom corn, all do well on reclaimed swamp land. We would however recommend planting some early varieties of corn, the King Philip for instance, as swamps are liable to later spring frost, and earlier ones in autumn than upland, and the corn will be apt to run largely to stalk, if of a tall-growing sort.]

TIMOTHY AND HERD'S GRASS.—Two persons were discussing the origin of the name of Timothy or Herd's grass—one said it originated from one Timothy Hurd, who introduced it into Pa. Query—What is Timothy and what Herd grass? The same or different grass? What is it called in England—what in this country? As you seem to be the arbiter of all disputes, the matter is referred to your decision. A short paragraph in your next will answer the question to the satisfaction of the disputants. X. [The Timothy grass is the Phleum pratense of botanists, and derives its name from Timothy Hanson of Maryland, (Loudon says Timothy Hudson,) who introduced it. It is often called Herd's grass in New-England, from a person of the name of Herd who disseminated it. South of New-York, the Red Top (or Agrostis vulgaris of botanists,) is called Herd's grass, from what origin we do not know. The Phleum is generally known in England as Cat's-tail or Meadow Cat-tail, and often by the name of Timothy; but we do not know of any called Herd's grass there.]

SEEDING FOR PASTURE.—I wish to seed down a pasture with a mixture of Orchard grass, Red-top or Herd's grass, and Kentucky Blue grass, to be seeded with wheat this fall. Now the doubt I feel, is as to whether it will be safe to seed Orchard grass in the fall—whether it is hardy enough to stand the winter in its young state. F. C. N. Leonardtown, Md. [Our own experience with autumn seeding applies only to the north,—where it is very successful if done early or soon after the close of the summer months. If sown much later, an unfavorable winter may throw out or destroy the young plants. Orchard grass sown in time to get a good foothold, will endure the winter. Autumn seeding with wheat we have found frequently to injure the growth of the grain; as wheat, like other plants, must be retarded when surrounded by a dense growth of young grass. The effect would be rather better if the grass seed were sown early in spring, and a brush or very light harrow run over the ground. But when practicable, the best way would be perhaps to harrow the stubble immediately after the removal of the grain, to start the weeds,

and in a few weeks plow the surface with a gang-plow, sow the seed, and brush it in by the first of autumn.]

LEAF-MOULD.—Is leaf-mould, as it is designated in books, entirely composed of rotten leaves, or is rotten wood also termed leaf-mould? C. F. [Leaf-mould is essentially decayed leaves, but it often contains portions of the rotten branches; but the less of these the better, as leaves form a finer material, more free from coarse or fibrous portions.]

Seeding.—We have four acres of ground, on which we have raised potatoes for the last two years, which we wish to seed down for grass. Will you inform us what species of grass seed would be likely to do best on it, and where such seed may be procured? The soil is a sandy loam—has been well manured heretofore. Please inform us also, how much seed would be enough for the four acres. W. F. Rogers Northampton, Mass. [The most popular seeding in the Northern States is a mixture of timothy and clover. The clover yields the chief product at first, and the timothy then takes its place. Timothy alone will give heavy and immediate crops of hay. A common quantity is a peck of the mixture per acre, but this is only half enough. A bushel per acre has been found to double the crop yielded by sowing but a peck. The seed may be had at all agricultural stores, and often of the common country merchants.]

HARDY CLIMBER.—Can you recommend me any quick growing vine for a rock fence? An evergreen preferred. HUNTER NICHOLSON. Columbia, Tenn. [The old single Michigan rose is a strong hardy growe-sund would doubtless answer a good purpose—also the Bignonia radicans or trumpet creeper. The ivy, which is not hardy enough for the Northern States but does well in Southern Pennsylvania, is a fine evergreen climber, and would probably succeed well.]

Time for Digging Potatoes.—Will you or some of your readers please inform me which is the best time to dig potatoes—as soon as the tops begin to die, or wait until they are perfectly dead? I have quite a number, and not knowing which is the best time to dig to keep from rotting, will some one inform me that has had experience in the matter. G. K. States Hilt, N. Y. [After the tops stop growing, and the leaves wither, the roots grow but little more. It is more convenient to remove the tops when they are entirely dead; but in waiting for this, we often lose more than we gain, the autumn rains having set in, rendering it difficult to house the potatoes in a clear dry condition. Nothing contributes more to promote the rot than storing the roots when muddy; and it is therefore best to take time by the forelock, and get them in during good weather, even if the stalks are partly green.]

Subsoiling and Plaster.—I want to put two fields (rolling ground) in pasture, and will be glad to have you inform me whether it would be best to have the ground subsoiled. The land is limestone, with yellow clay subsoil. Would it be an improvement to put plaster on clover, after the ground has been limed, and if so, in what quantity? A. S. J. Penn. [Subsoiling, except with gravel or light sandy earth, is always useful. If the subsoil is sterile, as subsoiling deepens the porous parts, it forms a reservoir or sponge for the absorption of surplus water in wet seasons, thus preventing excessive moisture; and gives it out again to the growing plants in time of drought. If the subsoil is fertile, the advantages are increased. Plaster in some localities greatly increases the clover crop—in others it proves of no value. The experiment must be tried a few times to prove its value. One or two bushels per acre is enough.]

Golden Rod.—We have got a lot of about 12 acres on our farm which is completely overrun with weeds of the enclosed sample. It grows from one to two feet high, and branches out at the top, and the roots spread so much that it is impossible to go more than five or six yards before the plow gets quite choked up. We should







like to know the name of this weed, and the best method you can give to root it out. Some call it the Mountain Flax. As for us we call it "The Weed." We only know of two other farms on which it is beginning to make its appearance, and we are sure the sooner it is plucked out the better. John Ainslie & Brothers. Hartwick, Otsego Co., N. Y. [The plant sent is a species of the Solidago or Golden rod—of which there are upwards of fifty different species. Dr Torrey describes twenty-two in the Natural History of the State. Many of these species run into varieties, and it is hence a matter of much difficulty to determine every one to a certainty. As the specimen sent is only a small portion of the plant, we cannot give the specific name. The root appears to be creeping, and, without branching much, to be densely covered with rootlets or fibres. If the dry stem could be burned late in autumn, and the roots turned deeply under by a large sharp plow, they would probably be mostly destroyed. If this cannot be done, the next best would be, after burning the tops, to plow the ground, and rake out the roots with a harrow. Perhaps some of our correspondents may know of a better wav.l .

SMUTTY WHEAT .- Please inform me through THE CULTIVATOR, whether smutty wheat will raise smutty wheat? I have some that I find it impossible to get the smut all out. Will you, or some of your readers, be kind enough to inform me whether it will grow or not, and what will prevent it? G. A. K. Hector, N. Y [Smutty seed produces a smutty crop. The seed of the smut fungus, when examined by the most pow-erful microscopes, are found to be much smaller than the vessels or sap pores of the plant, and are doubtless carried through them. The experiment has been made by sowing good grains taken from a smutty crop, and which were no doubt well dusted with the fungus seeds. A portion was planted without any preparation, and the crop had many smutty heads in it. Another equal por-tion of seed was repeatedly washed in water, and the number of smutty heads was many times less. A third portion was washed in brine, with a still more favorable result. The best way is to wash first in water, then in brine, and then roll the seed in slacked or powdered lime. This process, if care is taken to prevent the seed from becoming tainted from foul bags or other sources, will nearly extirpate it.]

REBECCA GRAPE, &c.-Will you please answer the following questions through the Cultivator: 1. Has the Rebecca grape proved to be any hardier than the Isabella? Is the vine of vigorous growth? 2. Will peaches succeed well if budded on Canada plum stocks? Are they as good for this purpose as the common plum?

3. Is there any difference between the leaves of the Angers quince and those of the Orange?

4. Are the Angers gers quince and those of the Orange? 4. Are the Angers and Portugal quinces identical or different varieties? OLD SUBSCRIBER. Worcester, Mass. [In Western New-York, several cases have been reported where the Rebecca, standing side by side with the Isabella, has proved much the hardier, and this we think is the general opinion. It is not so rapid a grower. Peaches will succeed well on the Canada plum—better we think than on the common plum. We could not easily describe the difference between Angers and Orange q in the leaves-except that the former is of freer and later growth. The Angers and Portugal quinces are distinct.]

MANURING MEADOWS, &c .- I wish to sow ten acres of rye this fall; will Peruvian Guano cause grass seed to take well? My object is to put what yard manure I have as a top-dressing on my meadows. I keep but little stock, and sell hay, and wish to keep my farm improving. Am I correct in my object, that is, to use guano to produce crops, and apply all the manure to the meadows top-dressing. Chas. B. Vall. Osuege Village, N. Y. [Guano has generally proved valuable for grain grops but many excellent farmers doubt its for grain crops, but many excellent farmers doubt its economy. Land kept constantly in meadow needs frequent top-dressing in autumn to sustain it. We should economy. prefer stocking with more animals, manufacturing ma-

nure, raising more food for the animals, in order that they may make more manure; and to adopt a rotation, allowing the grass in meadow to form a prominent part of the series, and continuing several years. We think of the series, and continuing several years. We think more hay might ultimately be sold from a farm thus managed than if exclusively in meadow, to say nothing

of its other products.]

APPLE SEED .- Will you be so kind as to answer three questions concerning apple seed in your next issue? First, What is the best way to procure apple seed? Second, How should the ground be prepared to plant it? And third, At what season of the year ought it to be planted? Joseph McKee. Dawson Co., Geo. Our correspondent will find an excellent mode for ing the seed from the pomace (which may be obtained at any cider mill) described on p. 204 of the Illustrated Register for 1859. To prepare the ground, make it fine, mellow and rich—such as would be suitable for garden vegetables. The seed may be planted late in autumn, or very early in spring. If in autumn, care should be taken that mice do not get them, planting them in a clean field, away from any rubbish that harbors mice—and if the animals are abundant or troublesome, it would be best to omit the work till spring. If the soil is rather heavy, it will be apt to form a crust by spring, through which the young plants may not easily find their way, unless surface of the earth, after they are planted, is sprinkled with half an inch to an inch of fine, old manure.]

CORN MEAL FOR HORSES.—How does new corn meal do for horses? W. F. R. [It should be fed cautiously to them at first, to prevent souring—gradually increased, they do pretty well on it]

Cows EATING PICKLES.—Can you or any of your friends inform me whether salt pickles are injurious to cattle or not? This summer I fed three cows about two and a half pails, and the same evening two of them were taken sick, and the next night one of them died, the other living till the next merning. About two or the other living till the next morning. About two or three years ago, I fed the same cows and another one more than I did these, and it never hurt them. When they were opened their bowels were all dried up, each layer having a blue coating on it. I was informed at the time that they had been fed salt petre by some un-known person, and that it was that which killed them. Will you please inform A Subscriber. Troy.

BLACKBERRIES FROM SEED .- Please say your Nos., if the Dorchester and Lawton blackberry can be grown from seed, and which is the best. can be grown from seed, and which is the best. There is so much difficulty in getting roots and trees here, that our only chance is by seed per mail. T. B. F. Flintsham Tan Yard, Texas. [The seeds will grow if carefully planted and attended to, but there will be no certainty that the product will be of any value.]

LIQUID MANURE. - With regard to the information that Mr. John Johnston wants about liquid manure tanks, I would refer him to Mr. F. M. Fraser of Utica, who has done so much in this and adjoining counties, towards the saving of liquid manure. There were over thirty thousand barrels of liquid manure applied to the meadows of this county this last spring, and all through his untiring perseverance for three years in introducing it. Any farmer that would visit the stables and yards on the different farms of the Messrs. Huntington of this place, would be satisfied of his practical knowledge in the construction of tanks. Those were superintended by Mr. Fraser himself, and they are a credit to him. Three years ago the New-York State Agricultural Society awarded him a handsome silver medal for his model stable floor, to save liquid manure, and it was well deserved. Mr. Fraser is a Scotchman, and only a few years in this country. An OLD FARMER. Rome, N. Y.

FEEDING SHEEP.—May a young farmer, who intends to feed sheep this winter for market, inquire on what kind of feed he can fat them fastest - how it shall be prepared, and in what quantity given per head per day? w. s. Goshen, N. Y. [Will some of our feeders reply to the above ?]



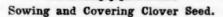


Dederick's Parallel Lever Hand Power Press.

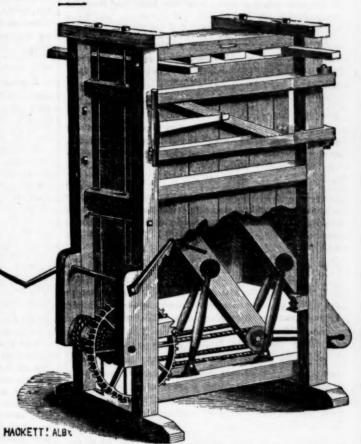
The annexed engraving represents an improved hand press for packing hay, cotton, hemp, flax, &c. It is the invention of LEVI DEDERICK, of this city, and is an improved modification of his parallel lever hay-press, so favorably known to the public, and is now, for the first time, arranged so as to be easily and successfully operated by hand power. As will be seen by the engraving, parallel toggle-jointed levers are employed for the purpose of exerting the direct force required to pack the bale, and these are so arranged as to secure at once a harmony of action between the parts, a great reduction of friction, and a perfect development of the progressive power of the levers. The levers are operated by means of two ropes, the one ends of each of which are fasted to the frame of the press, and the other ends, after passing around shieves on the lever, are wound up on a windlass. On the shaft with the wind-lass is a spur-wheel, and above it is another shaft, having a pinion meshing in the spur-wheel. On this latter shaft are two cranks. Two persons can operate the press by these cranks with perfect ease, and press a bale by making twenty-eight revolutions with the crank. is no method of exerting continued manual labor equal to cranks, and when with the cranks are combined a

progressive lever power, increasing in a ratio greater than the increasing compactness and consequent resistance of the hay, there is thus formed a perfect arrangement of mechanical powers, exactly adapted to the purpose designed to be accomplished.

This we understand to be the effect produced in the above hand press, and there must, therefore, be a large saving of time as well as hard labor. Those desiring hand presses for hay or other purposes, will find it to their interest to examine the above, or address the inventor agreeably to advertisement in another column.



EDS. CULT. AND Co. GENT .- For a harrow to scratch in my clover seed with last spring, I loosened the teeth of my wheel horse-rake, so as to let them drag behind, instead of hooking forward, as they do when raking hay. Then to the end of each tooth I fastened a block about five inches long, having a five inch spike through each end of it. It made as effectual and as harmless a harrow for the purpose as I ever used. It seems to me a sower might be easily attached to such a ma-chine, that would distribute the seed evenly, and not be much affected by the wind. A trough, for holding the seed, might be fastened under the axle, and made the seed, might be lastened under the axie, and made about as long as the wheels will permit to ride between them, with apartments in it to prevent the seed from running together, to one end or the other, as the ground may happen to be inclined. Holes for the seed to fall through, might be placed about three inches apart, in the bottom, and a slide, with corresponding holes through it, to bring the seed over the former, might be worked by a cam at one end of it against the spokes of one wheel, and a spring at the other end, to throw it back as often as a spoke has passed and moved it the opposite way. I fear my awkward description will not convey the idea very plainly, but



I do not see how to make it clearer. G. H. Medford, N. J., 9 Mo. 8.

White Mountain Cake.

One lb. flour, one lb. white sugar, half lb. butter, six eggs, one tea-cup of sweet milk, one small teaspoon of saleratus dissolved in the milk-two teaspoonfuls of cream tartar mixed with the flour. Bake in jelly-cake or Washington pie-tins, four in number.

FROSTING.—One sheet Cooper's isinglass dissolved in a small tea-cup of boiling water. Stir into it two lbs. pulverized white sugar. Flavor it with lemon, vanilla, almond, (and put a tablespoonful of the same flavoring you use for the frosting into the cake before baking.) When the cakes are baked, put one upon a plate; frost the top and sides over; then lay on another, evening off the edges with a knife; frost that in the same manner, and so on till all are done, and the "White Mountain" is finished. It is an elegant ornament for a supper table, and a handsome desert for dinner. It is a French cake, and called "Mont Blanc."

This way of making frosting is good for all kinds of cake. Sophiz.

ILLINOIS STATE FAIR.—The State exhibition of Illinois was concluded on Friday last, but up to the time of our going to press no conclusive report of the doings had been received. The chief attraction of the show had been received. The chief attraction of the show was the high premiums (\$4,500) offered by the State Society, together with the III. Cen. R. R. Co., for the best steam plow. Besides Fawkes' plow in operation, there was another—the invention and make of Van Doren & Glover—which plows, digs, ditches, reaps, mows, and also gives motion to stationary machines. We have not yet learned the successful competitor. We also learn that before the formal trial took place, Fawks plowed an agre, in one instance in ten, and another in plowed an acre, in one instance in ten, and another in twelve minutes, with his celebrated "Steam Plow."









Indian Corn-Harvesting.

Subjects relative to the corn crop have had frequent discussion in our columns the present season, nor have we yet done with them. Having grown our corn, we must now harvest and dispose of the product, and we invite articles from correspondents in regard to the best methods and management of the same. We now offer some hints on harvesting—a subject on which we have written so often that we may repeat, perhaps, ideas advanced before.

Some farmers follow the practice of cutting only the portion of the stalks above the ears, allowing the latter to stand some weeks later, and then picking and husking in the barn. They claim that this secures the better portion of the stalk before it is injured by frost and allowing free access of sun and air to the grain, hastens its ripening, also ensuring better and heavier grain than any other mode. They say it requires less laborless heavy lifting of corn and stalks-as less fodder is secured, and-but we must leave the question of topping corn to the advocacy of those who practice the same-we always cut up ours. We will only state a fact observed not long ago. A neighbor, raising as much corn in proportion to his stock, as ourself, topped his corn, saving only the upper portion of the stalks for fodder. He began to feed hay before New Year, while our stalks lasted into March, and brought his cattle through the winter in no better order than our own. His top stalks were soon gone, and his butts and husks left in the field, eaten and wasted much sooner, and with much less benefit to his stock and farm, than if he had followed the system of cutting at the ground and storing the whole product.

When corn is fairly glazed, it is fit to cut up at the root,—so as to secure all the fodder, that portion "only fit for manure" included—but it is in its place, (the barn-yard,) and of some value there as an absorbent, which can hardly be said of stalks left in the field to plow under. If a severe frost comes before corn glazes, or if one is apprehended, the sooner it is cut up the better, but a slight frost may occur at the time, of little injury to the fodder. We would cut up frosted green corn, to save it from that total drying out of the juices, which seems to take place if allowed to stand on the hills, and which immediate cutting prevents in greater or less degree. If not hurried by fear of frost, corn may better stand until the husks begin to loosen, to facilitate their removal in securing the grain.

The implement used in cutting up corn has been much improved and cheapened of late, and we now have corn-cutters of fair character-light, efficient, and dura-Taking two rows at a time, about six hills are placed together for a bundle-tops to the left is most convenient. The binder tollows with a small bundle of wheat or rye straw, from which he selects a band, and stooping, ties the corn as it lies, if the cutter has taken the care he should to lay the stalks evenly in the bundle, otherwise they should be raised erect to bring them even, and may then be tied and left standing. The bundles may be placed in stooks of from six to ten bundles, and bound near the top with two bands, a double one about breast high, and a single one higher up. Thus stooked they will cure in good order, and may stand for weeks, or even months without injury.

Another method is to cut and set up some twenty-five or thirty hills around one hill, without binding into separate bundles. This saves time in harvesting, but the stalks are not as convenient either to husk or to feed out, as when bound in the manner above noticed. If either of the many husking machines are to be employed, it would be the better mode, as they all take the stalks separate and unbound, and they can be bound after husking as easily as before.

A mode of cutting and binding corn by the use of a corn-jack has been recently brought to our notice, but we have not yet had opportunity to give it a trial. We have described it and its advantages in the following brace of paragraphs:

A stake or post two and a half inches square and five feet long, has holes bored through at different hights (to accommodate it to different sized stalks) near the top for diagonal arms, projecting some eighteen inches on each side—these fitting loosely, so as to be removed at pleasure. The lower end is sharpened so as to be set in the ground firmly without trouble. It is placed where it is wished to make a stook, and the corn as cut is set up between the arms, which support it nicely, until enough for a stook is ready. Then we have four bundles ready for tying without lifting or moving, and in place for a permanent stook. Tie them, slip out one arm, loosen and remove the stake or jack, and bind the stook together. It will stand firmly against a heavy wind—it is a small stook that will cure well, and when we wish to draw in before husking, is in good condition for that work.

Two men, we are told,—one to cut, and one to set the jacks (two jacks are needed in this case,) and bind bundles and stooks,—can harvest corn in this mode more rapidly and easily than in any other doing as good work. There is no lifting the corn from the weeds and pumpkin vines—it is in good and firm position at one operation, and the implement is so simple that any man who can use an inch augur can make one. Besides, the job is finished up; no corn is left lying to be caught in a storm, as is sometimes the case when cutting goes on faster than binding.

Facts warrant the statement that corn fully ripened on the stalks, is heavier than that husked before it becomes fully dry, and that there is some gain in grain—accompanied with a loss in the value of the fodder—when the corn is well dried on the hill before cutting. The farmer must decide as to the time for himself—more frequently, however, we let circumstances decide for us, cutting our corn when our work and the weather will allow us to do so. This year, however, we shall give especial attention to the corn fodder—it is, with us and and thousands of farmers, a substitute for the hay crop, which is very light the present season in many localities.

Improving the Farm.

There are farmers who cannot see room for improvement in the character and management of their farms. The majority, however are deterred from the work by the want of means, time, and knowing how to begin. The way to begin is on a moderate scale, commensurate with the time and means at command-but let a beginning be made with a plan for regularly extending improvements. In underdraining, take that part of the field first which needs it most; do it well as far as done, and open surface drains on the balance of the field. The character and productiveness of the field will be improved and increased-it will pay a profit on the outlay for improvements. Another year experience will show better how to go on with the work, and no farmer will cease in such efforts at improving the farm, long as he finds them profitable. It is the same with plans for more extensive manuring, for more thorough cultivation, for more systematic winter care of stock,





Notes for the Month.

DEATH OF JAMES PEDDER.—We regret to announce the death, at his residence in Roxbury, Mass., on the 27th ult., of JAMES PEDDER, senior editor of the Boston Cultivator, in the eighty-fourth year of his age. He was born at Newport, Isle of Wight, July 29th, 1775, and through his long life was a hard working and industrious man. After filling several stations of eminence in the Old World, he came to this country, in 1832, and has since been largely interested and engaged in agricultural improvement. For the past sixteen years he has been connected with the Boston Cultivator, to which his labors have been entirely bestowed. Mr. Pedder was a ready and earnest writer, and a large number of the articles furnished for that journal, as those of correspondents, were written by his own hand. He was a kind and genial man in all the walks of life, and his circle of friends was large.

Two New Strawberries.—Samuel Miller of Lebanon, Pa., who is well known for his interest in fruit culture, has sent us plants of two new strawberries, for the purpose of testing the quality, known as the Goldenseeded and Jeseic Reade. The former is hermaphrodite and the latter pistillate. We have understood these sorts were remarkable for their large size—our correspondent remarks, "both are very productive, handsome in appearance, of the largest size, and fine quality for so large a berry, better than Hovey or Wilson, but may not prove equal to the latter as a market berry, as they are not so firm." We are glad to perceive that the plants are offered for sale at a moderate price.

IMPORTATION OF STOCK.—Quite large additions have recently been made to the imported stock of our country. Among them we may mention the Cleveland Bay horse "Symmetry," purchased by Sanford Howard for Dr. John R. Woods of Albemarle county, Va. Symmetry is four years old, and was bred by Mr. J. Daniels of Yorkshire, England.

The ship Antartic at New-York, brought out one Durham bull and heifer, the property of Jas. O. Sheldon, Geneva, N. Y.; bull Grand Duke of Oxford, roan, calved 1856, sired by 2d Grand Duke, bred by Captain Gunter, Netherby Grande, Yorkshire; heifer Miss Butterfly, roan, calved 1857, sired by Master Butterfly 2d, bred by G. Murton Tracy, Esq., Edenbridge, Kent – one South-Down ram, for Samuel Thorne, Thornedale, Dutchess Co., N. Y., from the flock of Jonas Webb, Esq.—thirty South-Down ewes and two rams, five and a half couple of ferrets, four brace wood pheasants, three very fine tame lop-eared rabbits, one brace pointer dogs, one brace retrievers, and one brace Scotch Shepherd dogs, the property of R. A. ALEXANDER, Spring Station, Woolford Co., Ky. The sheep were selected from the flocks of the Duke of Richmond, Sir Robert Throckmorton, Jonas Webb, Esq., G. Sexton, Esq., and H. Lugar, Esq.

At Boston twenty-three head of Ayrshire cattle and eight Black-faced sheep, all purchased by Mr. Howard, have arrived. The cattle were for H. H. Peters. Southboro, Mass., and the sheep for ISAAC STICKNEY of Boston.

MILLET AND CANARY GRASS.—The millet sent us by J. CASE, Esq., of Troy, Pa, grown from the "honey blade grass seed," is the true Hungarian grass of the west. The other head enclosed is the Canary grass—Phalasis canariensis.

PORK—How much to a Bushel of Corn?—This is a question which is often asked, and it is also often answered by those whose experiences go to prove the facts of which their statements consist. B. P. Kirk, of Hornville, Chester co., Penn., furnishes an account to the N. Y. Tribune, of a "debt and credit" kept with his pig. It was of the Chester county breed, and was fed occasionally with bran, but it was reduced to the equivalent of corn, and counted in the following statement. He

fed 49 1-10 bushels of corn, at 60 cts. a bushel, and added the first cost of the pig, at two month's old, \$5—making a total of \$34.46. At seventeen months old the animal weighed 649 pounds, and sold for 7½ cts. per pound, making \$48.67, thus affording a profit of \$14.21.

We learn that Rev. Henry Ward Beecher has recently purchased from the herd of Col. S. D. Hungerford of Adams, N. Y., for his farm near Peckskill on the Hudson, several very fine animals, consisting of a yoke of four-year old steers—Short-Horns—two young Ayrshire heifers, Flora and Princess, and the young Ayrshire bull Tiger, all choice specimens.

Wine in Connecticut.—We learn from a correspondent, that Dr. Horatio Holmes of Stafford Springs, Ct., is doing considerable at the manufacture of native wine. In speaking of a visit to his residence, our correspondent says: "I found some fifty barrels of very good wine in his cellar, mostly made from the native grape of this vicinity—some of it, of six and more years of age, is really very excellent." He also speaks of a new seedling strawberry upon Dr. Holmes' grounds, of the Alpine flavor and shape, which he thinks worthy of cultivation. It is hardy, and a profuse bearer.

Dundalk of the Royal Agricultural Improvement Society of Ireland, was Luther H. Tucker, Esq., one of the Editors of the "Country Gentleman" and "Cultivator," published at Albany, State of New-York. Our readers are familiar with those well-conducted journals, from the extracts which we have frequently transferred to our columns. Mr. Tucker has been engaged for some months in an agricultural tour on the Continent, and we have read his sketches, as they appear in the "Country Gentleman," with great pleasure. We regret that he was under the necessity of restricting his stay in this country; but as we had the pleasure of a call from him, we endeavored to put him in the way of seeing some of our best things, before he finally left us, and we trust that he has taken with him to "the Land of the West" a favorable impression of "the Emerald Isle."—Irish Farmer's Gazette, Aug. 6.

Chupas.—I notice in the August Cultivator, an article on the Chufa or Earth Almond, written by Henry F. Gifford. I have raised some of the Chufas for two years, and my experience differs from the opinion of Mr. Gifford. I have also several patches of the grass which he describes as identical with the Chufa, and which I have not been able to eradicate. But in the opinion that the nut grass is identical with the Chufas, your correspondent is certainly mistaken. Last year, through press of business, I neglected to dig my Chufas, and though there was a fine crop, none of them have made their appearance this year, and where they grew two years ago none have made their appearance since, from which I infer that their vitality is destroyed by freezing. I am confident I could destroy the nut-grass by one season's fallowing, but in the cultivation of melons or other crops, some of it is pretty apt to live over. J. L. Fish. Painesville, O.

How to Make an Obstinate Horse Pull.—A writer in the Cotton Planter, gives the readers of that journal his method of obtaining a pull out of an obstinate horse, and also claims to be the originator of the plan. He says: "Take a small rope, (a plow line for example,) double it, make a loop of the double end, and draw it snugly around the under jaw of the animal, just behind his front teeth, with the loop underneath. Thrown the loose end over your shoulder, and "walk in the way he should go," holding fast and pulling steadily and firmly. Don't be troubled about him, for he will follow without fail, after he has discovered how you have "got him." This will also compel an animal to stand quiet to receive the bridle or collar."

TIME TO SOW TIMOTHY.—Mr. YANCEY, of Iowa, advances the idea in the Rural New Yorker, that the only proper time to sow timothy and red top, is when the seed becomes so ripe that it falls to the earth of its

stalks very slender and feeble in appearance until about 1st August. I began to think the experiment a failure with me. I have this day dug a part of them, and find they turn out full as well as those grown in the ordinary way. The potatoes fair, medium size, and very uniform—no very small ones. A. G. Danielson. Clifton Springs, N. Y.

The exhibition of the New Jersey State Ag. Society is reported the most successful one ever held by the society. The weather was good throughout, and the attendance was large and enthusiastic. It is estimated that over twenty thousand visitors were upon the ground the last

day of the show.

The Illinois State Fair closed the 10th instant, after a very successful display. The large prize offered by the society for the best steam plow, which constituted the greatest attraction of the exhibition, was not awarded, owing to the bad state of the ground upon which the trial took place. It now stands adjourned until Mr. Fawkes returns from the fair of the American Institute, in New York, where he is engaged to be present with his plow this week.

AUSTRALIAN WHEAT.—The following note accompanied the sample of wheat alluded to in it, and for which we tender Mr. WILLIAMS our thanks. The sample is, as may be supposed from its weight, an extraordinarily fine one, and will be divided between two of our wheat-growing friends:

wheat-growing friends:

New-York, Sept. 17, 1859.

Messrs. Tucker & Son-My friends, McPherson, Francis & Co., Melbourne, Australia, sent me a sample of wheat grown at Belfast, Australia, "said to weigh 67 pounds per bushel imperial." Herewith you have a part of the sample, which you or some of your friends may like. J. Henry Williams.

The Bark we Crop. The New England Ferrices

The Barley Crop.—The New England Farmer speaks of barley as a grain raised to some extent all over New England, and thinks it "ought to take the place of hundreds of acres that are devoted to oats, as it is better adapted to seeding down land with, than oats, requires less seed, ripens as well, and is admirably fitted to our short, hot summers,—the average product will be nearly as much as oats, and when harvested, is worth a third more for horses, hogs, poultry or cattle." If the editor will look over the report in our State Transactions for 1858, of the "Agricultural Discussions during the State Fair," he will see the estimation in which the barley crop begins to be held by the farmers of Central and Western New York, who have had some years extensive experience in its culture. The present season's crop will induce many farmers to discontinue its culture entirely, spring barley especially, winter barley having proved a more remunerative crop. But it requires the best soils, and presents few points of comparison with oats as a substitute for that crop.

THE STEAM PLOWS AT CHICAGO.—We learn to-day that Fawkes' Steam Plow came off victorious at Chicago, receiving the Gold Medal of the U. S. Ag Society, and the \$3,000 offered by the Illinois State Ag. Society, and the Illinois Central Railroad Company.

Churas and Nut Grass.—I agree with Mr. Fish, that Chufas and Nut grass are different things. I have raised both. Mr. Gifford will see, if he examines them, that the kernel on the Nut grass is nearly round, and Chufas are long. I thing his hogs will quickly tell the difference, or if they eat Nut grass as well as they will Chufas, he will have no trouble in getting rid of it.

L. RISLEY. Cedar Rapids, Iouca.

SHEEP AND Dogs.—The Cincinnati Gazette publishes the statistics of the number of sheep killed and injured by dogs in the state of Ohio, with their estimated value, as reported by the township assessor to the auditor, August 1, 1859. Of the eighty-eight counties in the state, the total damage to sheep by dogs in 1858, is estimated at \$146.740, or an average to each county of \$1,667.58.

We are unable to furnish the information desired by "A Subscriber" at Lisbon, Ill.

own accord—in this latitude, from the 20th of July to the middle of August. A great many failures occur in sowing in the spring and fall with grain crops, and many farmers have come to the conclusion, with Mr. Y, that such seeding won't pay; that it is better to sow it alone, and at the time above stated.

We learn that the Board of Trustees of the N. Y. State Agricultural College, at their meeting at Ovid on the 23d inst., unanimously elected Maj. M. R. PATRICK President of that Institution. The college buildings are in a state of forwardness, and will be roofed in by the middle of October. We are promised a report of the proceedings for publication hereafter, and have only time this week for a mere announcement.

KERRY CATTLE AND SHETLAND PONTES.—Just before his departure from Liverpool, the writer saw at the Adelphi stables in that city, several specimens of these singular breeds in charge of Mr. Bell, who was soon to ship them to the United States. They had been purchased by Mr. Howard of Boston, during his recent tour, in addition as Mr. Bell, stated, to 32 head of Ayrshires, a fine Cleveland stallion, a number of the Scotch blackfaced sheep, and a Cotswold ram. The Kerry cattle were alluded to in a letter written from Ireland. They will be regarded quite as curiosities here from their stunted size, for they come from among the hills where they can find only the poorest sustenance, and, indeed, they are said to require little more food or shelter than the goat. Scarcely sufficient credit, by the way, has been given in this country to the efforts made by Mr. Bell in the shipments of stock at different periods for several years back. To his care and faithful attention the success of many of our most valuable importations has been due in no small degree. It is a pleasure to refer to the subject, because inquiries are frequently made by parties desiring to purchase, as to some means of securing the safe embarkation of what they would like to buy, and for the benefit of such it may be added, that any commands addressed to Mr. Bell, Adelphi Stables, Liverpool, will be sure to meet with prompt at-

tention. L. H. T.

PEARS.—Messrs. Ellwanger & Barry, Mount Hope
Nurseries, Rochester, have favored us with a basket of
Pears from their grounds, consisting of beautiful specimens of Belle Lucrative, Louise bonne de Jersey,
White Doyenne, and Flemish Beauty—a present which
affords abundant testimony of their skill in growing
pears, however others may fail, and the savor of which
will cause them to be held in grateful remembrance.

We are also indebted to Mr. Amos Fish, of Bethlehem, for fine samples of the Beurre and Bosc pear.

ISABELLA GRAPES.—We are indebted to Hon. Z. A. Leland, of Mechanicsville, for several bunches of the Isabella grape, fully equal in size and beauty to any we have ever seen.

THE SOUTHERN RUBAL GENTLEMAN.—Our old friend, Dr. M. W. PHILIPS, has become the conductor of the Agricultural Department of this journal, published weekly at Grenada, Miss. The Doctor is a ready writer and an enthusiastic advocate of agricultural improvement, for which he has labored with untiring zeal for more than a quarter of a century.

GRAPES.—We are indebted to Mr. John Dingwall of this city, for fine samples of Rebecca and Northern Muscadine grapes—the latter much the best specimen of the variety which we have seen.

CHEESE.—According to the Herkimer Co. Journal, 1,088 boxes of cheese, weighing 67,585 lbs., were received at the freight depot in Little Falls on Monday, August 29, all of which was shipped to New York in the afternoon, and arrived at New York by eight o'clock the next morning.

Potato Sprouts for Planting.—I planted some half dozen hills of potato sprouts, May 23, on rather light sandy loam, without manure—sprouts averaging say one inch in length—about one dozen in a hill. They were rather slow in making a show above ground—







Willows Injurious to Drains.

EDS. CULT. AND Co. GENT .- As the subject of underdraining appears now to claim a large share of attention from the farming community, I have thought that any facts which may have an important bearing upon the subject, might be acceptable to some of your

I wish to advise the inexperienced not to plant willows near where they expect to lay drains, nor to lay drains near willow trees until after the latter are killed. I have had two drains of three inch tile entirely stopped by willow roots; one in two summers, the other in about two and a half. One of them (which was laid three feet deep,) was dug out again, as far as it had been stopped, this last spring. About twenty of the tile, opposite a willow, were entirely filled with fibrous roots, matted together, and holding a little sand. As soon as these were taken out, the water came from the drain above in a stream as large as the tile would hold, and continued running so for several weeks, until it began to fail on account of dryer weather. G. H. Medford, N. J., 9 Mo 8.

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Send for Circular.

Oct. 5-w6tm2t

RAPE VINES.—All the Dest Native
Dest Native
One good Plant each of the
Anna, Delaware, Diana, Concord, Hartford Prolific, Louisa, and Rebecca, carefully packed for \$5.

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Oct. 5-w6tm2t

Utica, N. Y,

HUDSON RIVER ANTWERP RASPBERRY

Lawton & Newman's Thornless Blackberry Plants \$6 er 100.

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DAVID KETCHAM.

Milton, Ulster Co., N. Y. per 100.

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F. A. BRUGUIERE, 51 Cedar-Street,
Oct. 6—woam3m—m3t.

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EVERY FARMER SHOULD POSSESS

CARPENTRY MADE EASY.

It teaches a new system of Framing for building Farm Houses, Barns, Bridges, &c., in language free from technical terms, so that every man can be his own Carpenter. 38 Plates, and 200 Figures, Royal, 8vo. Price \$3. A sample copy will be sent, postpaid, to any reader of this paper for \$2.

J. CHALLEN & SON, Oct. 1—mlt.

Philadelphia.

C HOICE FOWLS.—A limited number of each of the following varieties to spare, at low prices: Grey Dorking, White-faced Black Spanish, Earl Derby and other Games, and Aylesbury and Rouen Ducks. All warranted to be well bred.

Send for Priced Circular. D. S. HEFFRON, Oct. 5—wtfm3t

Utlca, N. Y.

THOROUGH BRED AYRSHIRES.

"Rosa Lee," 3 years old, color Red and few white
spots, bred from stock Imported by Capt. Nye. Price

\$100.

"Lucy Neal," 4 years old, color White with small red spots, bred from same stock. Price \$150.

"Effle," 4 years old, color dark red and white, bred by stock Imported by Wm. Watson, Esq. Price \$175.

Rosa Lee is in calf by Young "Malcolm"—the others by Young Kelburn. These animals combine the blood of several different importations of distinct strains of blood, and are desirable animals. For sale by

ALFRED M. TREDWELL,

Sept. 29—w2tm2t.

Madison, Morris Co., N. J.

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Yearling and two year old Heifers. For sale by
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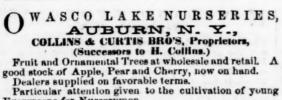
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rees and Plants collected from the woods at reasona-

Apples grafted to order during the winter, for spring planting.

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I MPROVED SHORT HORNS.—
The subscriber, wishing to reduce his herd in numbers, offers for sale at moderate prices several excellent COWS with good pedigrees.

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twenty others.

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N. B.—All plants are securely packed, and Express Receipt sent to the purchaser, with Descriptive Catalogues and directions for culture.

Sept. 22—wlimit*

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Double Mold Board Plow, which makes it the most useful implement in use. As a Potato Digger it has no equal. Price of combined machine \$8. Manufactured and sold by GRIFFING BROTHER & CO., Aug. 4—w8tm3t. 60 Cortland St., New-York.

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For grinding feed of all kinds, also for flouring. It is portable, and will grind with an ordinary Two Horse Power, from five to seren bushels of feed per hour perfectly.

It is called "Lyon's & Phillips' Patent," and is warranted to work satisfactorily, or it can be returned at our expense. It is no humbug, but a "Simon pure article;" and every Farmer and Miller that uses it will certify that it is just the article represented.

Price for Feed and Corn Cob Mill, \$100 00

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Weight 450 pounds, and requires a space of four square feet. For further particulars address,

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A R L Y POTATOES AND PLENTY OF
THEM—"The Yankee Prolific" Potato, fit for market June 20th. Yields 32 to 34 marketable tubers, and 10
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JOSEPH A. PAIN,
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The subscriber has just issued his Catalogue for 1859, containing full pedigrees of all the animals now composing his herd It will be forwarded on application to those lesiring it.

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Aug. 25—w3tm2t.

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Sept. 1-wltmlt.



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imported stock; is of good size, perfectly kind, and has
proved himself a sure and superior stock getter.
"Young Metropolitan," I year old, bred by Joseph
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now in calf to "Metropolitan," a bull recently sold by me
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Also fifteen superior, high grade heifers, from 1 to 4
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65 Beaver-st., New-York,
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ALBANY, N. Y.

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